DOCUMENT RESUME

ED 124 737 CE 007 352

AUTHOR	Myrick, Daryl
TITLE	Anne Arundel Career Education Project. Final Report.
INSTITUTION	IBEX, Inc., Durham, N.C.
SPONS AGENCY	Anne Arundel County Board of Education, Annapolis, Md.
REPORT NO	VT-102-858
PUB DATE	Nov 75
NOTE	151p.
EDRS PRICE	MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS	*Career Education; Decision Making Skills; Demonstration Projects; Elementary Secondary Education; Pretests; *Program Evaluation; Self Concept; *Student Testing; *Tables (Data); Teacher Attitudes; *Test Results

ABSTRACT

The third party evaluation report covers the 1974-75 school year, the second year of the demonstration project. Summarized are the background, goals, and objectives of the project. Evaluation is centered upon four major information domains or evaluation areas of interest: student self-concept, student decision-making skills, student relationship with the world of work, and teacher attitudes towards career education. The major portion of the document consists of detailed descriptions of the testing program and the results of the four tests administered. These are the self observation scales, decision-making scale, career maturity inventory, and a teacher survey. Student test results are analyzed by sex, grade level, and administrative area within the county. Test results are summarized in the appendixes. Data reported are primarily pretest data, with post-test data to be included in the 1975-76 evaluation. It is recommended that the staff determine if sex differences in test results are due to curriculum deficiencies. Responses to the teacher survey are summarized in the report and shown by area in the appendixes. High teacher support for the project is evidenced by the integration of career education into other subject areas, effective use of materials, and high number of career education activities undertaken. A bibliography is included. (RG)

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FINAL REPORT
FOR THE
ANNE ARUNDEL CAREER EDUCATION PROJECT
1974-75

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FINAL REPORT

FOR THE

ANNE ARUNDEL CAREER EDUCATION PROJECT

PREPARED BY:

Daryl Myrick
Consultant

REVIEWED BY:

Helmuts A. Feifs
President

SUBMITTED TO:

Mr. Robert Jervis
Coordinator, Career Education
Anne Arundel County Public Schools
2644 Riva Road
Annapolis, Maryland 21401

November 1975

IBEX, Incorporated
2526 Erwin Road
Durham, North Carolina 27705

VT 102 858

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PREFACE

This document, submitted to the Anne Arundel County Public Schools, presents the final evaluation report for 1974-1975 school year. The evaluation is of an exemplary project in Vocational Education, conducted under Part D of Public Law 90-576. Two companion documents, the Evaluation Design Document and the Instrument Catalog preceded this one. This report briefly reviews the information from the other reports and presents the results of this year's evaluation.

Mr. Robert Jervis and his staff have been most helpful in all phases of this evaluation. Their cogent questions and concerned suggestions insured a good evaluation. A further word of praise should be given to teachers, counselors and administrators whose hard work made possible the gathering of the data used in this evaluation.

Mr. Helmuts Feifs and the staff of IBEX have been most helpful in the preparation of this report. The author is responsible for all errors and opinions.

Daryl Myrick
Consultant
IBEX, Incorporated

SECTION I. EXECUTIVE SUMMARY AND RECOMMENDATIONS

The following are synopses of the major findings of this evaluation. Readers are enjoined not to draw major conclusions from these summaries, as the data reported is primarily pretest data with the post test data coming in the 1975-1976 evaluation. Readers are, however, encouraged to read the whole report in order to fully understand the parameters of an excellent program.

1. The self concept of Anne Arundel students approximates national norms. Some growth was noted, but it is too early to state that any clear pattern of growth has emerged. Sex differences by grade and area are noted, but no clear pattern is evident.

2. The results of the Career Maturity Inventory indicated that Anne Arundel students approximate the expected mean on job knowledge, realistic job choices and planning ability. Sex differences are noted across area and grade.

3. The decision making skills of Anne Arundel students approximated the norm group with some internal similarity across areas. Sex differences were noted and were consistent by sex across areas.

4. The decision making skills of Anne Arundel students are generally high.

5. Anne Arundel teachers, as a group, felt that they understood the term "Career Education". This is consistent with the high number of activities undertaken to integrate the Career Education Objectives into classroom instruction.

6. Anne Arundel teachers had career education materials at the classroom level and evidence exists which indicates that the materials, Career Education Guides and Objectives, as well as other career education materials were used effectively.

7. Evidence exists which indicates that a majority of Anne Arundel teachers do not wish to see career education taught as a seperate element of the curriculum, but prefer to integrate it into other subject areas. This must be considered a highly positive indication of teacher support for career education.

8. Anne Arundel teachers were aware of the Career Education resource persons available to them.

9. Evidence exists to indicate that elementary school teachers are aware of the resources of the technology centers and that they are using these resources.

Recommendations:

IBEX, as a result of its evaluation in Anne Arundel, submits the following recommendations for consideration.

1. Career Education staff should thoroughly review this evaluation to determine if sex differences in student results are the results of curriculum deficiencies or intrinsic to the students.

2. Further analysis should be made of the student and teacher outcomes, by area, to determine if differential Career Education effort within the area is responsible for area differences in scores.

3. More attention should be given to process evaluation in the 1975-76 evaluation in an effort to clarify differentials in area product outcomes.

4. Some measure of student knowledge of the economic, social and personal significance of careers should be taken.

SECTION II. THE FEDERAL ROLE

During the latter part of the sixties, the high level of youth unemployment precipitated renewed attention to the role of vocational education in providing educational opportunity for individuals in all strata of American society. The thinking which led to the revision of the concepts of pre-vocational and vocational education was clearly expressed in House Report 1647 of the 90th Congress, Second Session:

> ...The General Subcommittee on Education has concluded that the following five ideas recommended by the Advisory Council (on Vocational Education) deserve serious consideration: (1) any dichotomy between academic education and vocational education is outmoded; (2) developing attitudes, basic educational skills and habits are as important as skill training; (3) pre-vocational orientation is necessary to introduce pupils to the world of work and provide motivation; (4) meaningful career choices are a legitimate concern of vocational education; (5) vocational programs should be developmental, not terminal, providing maximum options for students to go on to college, pursue post-secondary vocational and technical training, or find employment. (House Committee on Education and Labor, 1968).

The Vocational Education Amendments of 1968 provided means for implementing the ideas in this House Report by including provisions for developing and administering exemplary programs and projects designed to produce new methodologies in occupational education. Under Part D (Exemplary Programs and Projects) of the Vocational Education Amendments of 1968 (P.L. 90-576, Section 141), Congress defined the purpose of exemplary programs and projects:

> ...to stimulate, through Federal financial support, new ways to create a bridge between school and earning a living for young people who are still in school, who have left school either by graduation or dropping out, or who are in post-secondary programs for vocational preparation, and to promote cooperation between public education and manpower agencies.

Grant Venn, Associate Commissioner for Adult, Vocational, and Technical Education (Policy Paper AVL-V70-1, 1969) pinpointed the priorities that should be established for an exemplary occupational education program in light of the 1968 Amendments:

1. Provisions for broad occupational orientation at the elementary and secondary school levels so as to increase student awareness of the range of options open to them in the world of work.

2. Provisions for work experience, cooperative education and similar programs, making possible a wide variety of offerings in many occupational areas.

3. Provisions for students not previously enrolled in vocational programs to receive specific training in job entry skills just prior to the time that they leave the school. (Some of these training programs might be very intensive and of short duration.)

4. Provision for intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling. (Placement might be in a job or in postsecondary occupational training. Placement should be accomplished in cooperation with appropriate employment services, manpower agencies, etc.)

5. Provisions for the grantee or contractor to carry the program on with support for regular funding sources after the termination of the Federal assistance under Part D of P. L. 90-576. (Federal assistance under Part D cannot exceed three years.)

Grant Venn's statement became the program guidelines for individual proposals from the states. Combining Venn's statement with House Report 1647, Anne Arundel developed a holistic approach to provide adequate career education for school children in grades K-12.

The U.S.O.E's request for proposals described the general nature of the exemplary program which would be federally funded. The proposal, written by the Board of Education of Anne Arundel County, upon which the program was developed, incorporated the national mandate for change in vocational education, the needs of the Anne Arundel schools and community, and selected aspects of related programs throughout the country.

In order to clearly delineate the changes the program was intended to accomplish, a set of specific product objectives was developed. In conjunction with these product objectives a set of desired processes was identified which was to provide the means for attaining the product objectives.

The desired processes consisted of general descriptions of the resources and how they were to be used. A set of process objectives capable of being measured was then derived from these more general desired processes.

For simplicity, the product goals, product objectives, process goals and process objectives will be listed separately.

SECTION III. LOCALE

Anne Arundel County, one of the largest counties in Maryland, encompasses an area of 458 square miles. To the north, it borders on Baltimore City, reflecting the economy and occupations of a large urban area. To the south, it extends into a largely rural area south of Annapolis. The Anne Arundel County Public Schools serve the needs of rural, suburban, and urban communities.

Anne Arundel County is centered within the Baltimore-Washington metropolitan area and has undergone a rapid growth in population during the last decade. According to the 1970 census, the population of Anne Arundel County was 297,539, a 44% increase over the 1960 figure of 206,643. The estimated population of Anne Arundel County for 1980 is 415,700. (from Community Economic Inventory, Anne Arundel County, Maryland) Table 1 shows the population changes in Annapolis, Anne Arundel County, and Maryland.

Table 1. Population Changes in Annapolis, Anne Arundel County, and Maryland 1940-1980.

Year	Annapolis Population	Annapolis % Change	Anne Arundel County Population	Anne Arundel County % Change	Maryland Population	Maryland % Change
1940	9,542	-2.7	68,375	23.9	1,821,244	11.6
1950	10,047	5.3	117,392	71.7	2,343,001	28.6
1960	23,385	132.8	206,634	76.0	3,100,689	32.3
1970	29,592	26.5	297,539	44.0	3,922,399	26.5
1980 (Est.)*	--	--	415,700	39.7	4,678,900	19.3

*Maryland State Planning Department, The Population of Maryland Projections to 1980, July, 1967.

The labor market area of Anne Arundel County includes all of Anne Arundel County, portions of nearby counties, and all of Baltimore City. Employment in Anne Arundel County is distributed among several industries, agriculture, and government. The 1972 civilian labor force in Anne Arundel County averaged 122,655. The unemploy-

ment rate for 1972 averaged 2.9%. (Community Economic Inventory, Anne Arundel County, Maryland).

Anne Arundel County School System is one of twenty-four public school systems in Maryland, and is one of the sixty largest school systems in the country. The county encompasses seventy-five elementary schools, twnety-four secondary schools, and seven special schools. The total number of school-ages children enrolled in the county's public schools is approximately 77,823. Of these, 15.7% are considered disadvantaged. Of the attendance area population, 11.9% is non-white. The average number of persons per household is 3.67%. (from Title I Eligibility Data for Maryland, Anne Arundel)

An analysis of the current and projected enrollment of Anne Arundel County Schools resulted in the establishment of four administrative areas, each consisting of at least one high school and all of its junior high and elementary feeder schools. Area I is located in the northern part of the county and consists of 23 schools with a total enrollment of 18,086. Area II includes the eastern and central parts of the county and consists of 26 schools with a total school enrollment of 20,281. Area III consists of 23 schools in the western part of the county, with a total school population of 22,156. Area IV is located in the southern area of the county and consists of 29 schools and a total population of 17,300.

All areas are presently involved in the career education project.

SECTION IV. PROGRAM DESCRIPTION

Resulting from a recommendation by Superintendent of Schools, Dr. Edward J. Anderson, a task force of county teachers and guidance counselors, representing a variety of disciplines and levels, was created in September 1970. Members of the task force were granted a leave of absence from their positions for the purpose of developing a curriculum for career development which would meet the needs of the total school population.

Following a period of research and orientation to the development of career education curricula, the task force identified five key concepts, forming a conceptual framework for the career education program. The five concepts are self, career, society, technology, and economics. For each concept, conceptual statements were written which channel the student's learning. Supporting ideas which further explain the five major concepts are stated as subconcepts. The concepts, subconcepts, and conceptual statement are parallel and can be taught simultaneously.

Behavioral objectives for each subconcept meausre and evaluate learning outcomes. Since these objectives have been aimed at the students' levels of learning ability and comprehension, the program curriculum is divided into four grade levels: K-2, 3-5, 6-8, 9-12. To achieve these objectives, various student activities at the four levels have been suggested. The program that emerged from the efforts of the task force is based on skills, attitudes, behaviors and experiences necessary for career decision-making. It is a sequential, interdisciplinary program, integrating the concepts of career education into school curricula at all levels.

Implementation

Once the curriculum was developed, six members of the original task force, together with a coordinator, were assigned as resource teachers to a pilot program in the Brooklyn Park area. Their work began with an extensive two-week evaluation workshop in the summer of 1971. The implementation team decided how they would evaluate success in achievement of their goals and which tests would be appropriate to use in evaluating the program. Career materials, which had been evaluated earlier in the year, were ordered for use at all levels.

Workshops and one to one in-service are held with teachers to introduce them to the concept of career development and the means of implementation. The teachers became familiar with the concepts, subconcepts, and behavioral objectives of the program and integrated the concepts into their own curricula.

Other workshops are held to acquaint elementary teachers with the Career Technology program and to incorporate technology activities into the elementary curriculum. Teachers who attend the workshops become liaison people in their schools and help train other staff members in career education.

The community plays a major role in the Anne Arundel County project. Parents and resource persons have participated in various classrooms, and have worked with teachers and counselors.

Elementary Component (K-6)

The elementary component of the program focuses on career awareness, self-understanding, and "hands-on" experience. Students are introduced to the concepts of self, society, economics, and technology. Introduced to career education resources through classroom instruction, resource persons in the classroom, field trips in the community, and "hands-on" experiences. They see a relationship between classroom learning and the world of work, and they experience a sense of pride in their accomplishments.

Junior High Component (7-9)

At the junior high level, students learn not only abstract information, but also the application of this information in terms of decision-making and career preference. The range of job exploration narrows and students begin to identify career preferences in terms of individual abilities, interests, and values.

The community plays an important part in the junior high component of the career education program. For example, on "Career Day", ninth grades made on-site visits to different areas in the community according to their career interests. They were able to see various occupations and work settings that might interest them. Seventh and eighth-graders visited classrooms in the school which had been set up to depict each of fifteen different occupational clusters. The seventh-graders visited all fifteen clusters and were introduced to several possible careers. The exposure to many different types of work helped the students assess their individual interests in various careers. The eighth-graders visited three of the fifteen simulated work settings in accordance with their tentative career preferences.

Teachers, counselors, and community representatives work together to help students at both junior and senior high levels develop tentative career plans. By working closely with the senior high vocational program, teachers and counselors at the junior high level have provided ninth grade students with simulated or

actual work experiences in specific areas. Disadvantaged ninth grade students are learning math and language arts skills in a simulated practical work setting. Mobile units have been set up to provide students with experience in distributive education and business and office occupations. This aspect of the project involves a close working relationship between the career education project and existing vocational programs.

Senior High Component (10-12)

At the senior high level, career concept areas and their application to classroom instruction continue to be stressed. Tentative occupational choices are made and students can continue preparing for higher education or select programs involving job entry skills. Programs which prepare students for entry level skills are offered in the areas of data processing, distributive education, office education, trade and industry, cooperative occupational program, health occupations program, and vocational experience program.

Counseling and Guidance

The goals of career education are closely related to those of guidance and counseling in the Anne Arundel County Schools.

Process Goal IX of the Career Education project in Anne Arundel County states "This program will make the expertise of counselors available to teachers and ultimately to more students." Through the career education project, a counselor was added to the career education teams to initiate activities involving both teachers and counselors working as a team. Combined teacher-counselor workshops acquainted teachers with the role of the counselor in the career education program and the activities the counselor could perform. Counselors learned what career education programs expect of the teachers and how counselors and teachers can work together in implementing a successful career education program. Counselors also attended workshops which equipped them with the skills to serve as a resource to teachers. Counselors are an integral part of the school team responsible for career education.

A counselor added to the career education teams, in Area III, functions as a resource to counselors in providing a training and demonstration service.

In addition to their other responsibilities in Anne Arundel schools, guidance departments have traditionally worked with students desiring placement in jobs or further education. They have provided newsletters to students concerning careers and job openings,

and have served as job referral sources for employers. It was decided that counselors and guidance personnel have neither the time nor the assignment of job searches or screening of applicants. In order to provide effective placement, the career education project initiated a placement and follow-up component to handle these assignments.

Placement and Follow-up

Product Goal V of the career education project in Anne Arundel County is "to promote the placement of all exiting students in either (a) a job, (b) a post-secondary occupational program, or (c) a baccalaureate program." Leonard C. Bates was added to the career education team and given the assignment of developing a model placement for all exiting students.

Placement is a relatively new part of the career education program in Anne Arundel County so the team began by studying the role of placement in other school systems and assessing its usefulness and adaptability to the Anne Arundel system.

Many aspects of the placement and follow-up component are still in the planning stages. In order to avoid duplication, the team assessed the placement and follow-up efforts already existing in the county. It was necessary to determine the need for placement services in Anne Arundel County, the placement services already provided, those services still needed, the means to secure the needed services, and the necessary personnel. The team also decided the necessary coordination, follow-up and communications procedure to be implemented. Senior high school counselors who have traditionally worked in the areas of placement and follow-up were very helpful in developing a model placement and follow-up program.

It was agreed by the team that a good placement service should provide job searches for the students and a data system of information about job applicants, employers, and job requirements. The placement service should be in constant contact with employers for jobs and with educational institutions for further education. It should also provide an initial screening of applicants to fill job or education requirements. To evaluate the long-term success of a placement service, an effective follow-up system is necessary.

A pilot program in placement and follow-up was implemented in Annapolis Senior High School in February 1974.

Procedures for Implementation

The Anne Arundel County Board of Education was so interested in implementing a career education program in its schools that it

developed and funded a pilot program in 1971, two years before receiving federal financial assistance. Federal funding began in the 1973-74 school year and is being used to meet the initial costs of extending the program to all schools in the system.

The Brooklyn Park area in the industrially oriented northern end of the county was chosen as the pilot area for the career education program in the 1971-72 school year. The pilot program consisted of a high school, junior high school, and four feeder elementary schools. Brooklyn Park was selected because it serves a high proportion of socio-economically handicapped students as defined under ESEA Title I.

Six teachers from the developmental task force, together with a coordinator, were assigned to the Brooklyn Park areas as resource persons. Teachers and resource persons worked together to integrate career education into the existing school curricula.

In the fall of 1972, the project was expanded to include a second high school, junior high school, and their feeder elementary schools, thus including most of administrative Area I. In the fall of 1973, the project was expanded to include administrative Area III.

As already noted, Anne Arundel County is organized into four administrative units (areas). The program was originally scheduled to expand into all four areas by the 1975-76 school year. Acceleration of the program occurred during the 1974-75 school year, however, with Areas I and III in the total implementation phase and Areas II and IV in the initial implementation phase. Workshops and in-services are planned and scheduled as needed to introduce teachers, counselors, and administrative personnel to various aspects of career education and its successful implementation in their schools. Extensive workshops and in-services are planned for new schools as they enter the project.

The project is designed to reach all students in the participating schools, and to include all schools by the end of the three-year project. Local funds will be sufficient to maintain the supply of curriculum guides, materials, and equipment after the three-year project.

A central resource center is operating in each area to supply teachers with career education materials. In addition to these resource centers, mini resource centers are being set up in individual schools. All materials developed or purchased through the project are available to county teachers through these centers. Materials from the project are also available to non-profit private schools in the area and their teachers are invited to attend various in-service activities. Each area also has two resource teachers to assist teachers with materials and techniques. (Area IV has one aide and one resource teacher)

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Program Goals

The Career Education Program was designed to meet the needs of the students of Anne Arundel County in enabling them to:

1. Develop an awareness of self and others: A realistic career choice depends upon the individuals understanding of his interests and abilities. An understanding of self and others enables an individual to clarify his own values and responsibilities as a contributing member of society.

2. Develop favorable attitudes about the personal, social and economic significance of work: The school should encourage in students the development of favorable attitudes toward employment. Students should understand that work gives personal satisfaction and fulfills social and economic needs of society.

3. Develop and practice appropriate career decision making skills: Students should be taught to analyze situations and problems on the basis of pertinent information. They should be able to integrate their knowledge of self and the world of work in order to make appropriate career decisions.

4. Develop the skills necessary to obtain employment and/or to pursue further education: Schools should provide programs which integrate academic, communication, and manual skills needed to help students achieve their career goals. The schools also have a major responsibility in guiding students toward realistic course selections based on career preference.

5. Obtain employment and/or to pursue further education: The schools have an obligation to assist in the placement of all exiting students in gainful employment and/or in a post-high school academic or technical educational setting at an entry level appropriate to their career objectives.

Revised Objectives

Goal 1. To develop an awareness of self and others:

Objectives:

III. After participating in various activities, the student completing level one will be able to tell about those things he enjoyed and those he did not.

112. Given various attitudes and bahaviors that people demonstrate, the student completing level one will be able to differentiate between those attitudes and behaviors that he feels fit him and those that do not.

113. Having participated in a group task, the student completing level one will be able to identify the contributions made by each member of the group.

121. After listing his own abilities and interests the student completing level two will select from a list of tasks those which are compatible with his interests and abilities.

122. Given a specific task the student completing level two will describe how his attitudes and behaviors affected his performance.

123. Given a specific work setting, the student completing level two will list both positive and negative aspects of that working environment.

124. From a list of work related values the student completing level two will identify those which are a part of his own value system and decide whether they would have a positive or negative effect on his performance in a specific task situation.

131. After analyzing his interests and abilities the student completing level three will be able to make tentative occupational selections.

132. From a list of attitudes and behaviors the student completing level three will identify those which he feels should lead him to success in any work situation.

133. The student completing level three will compare and contrast his present values with those inherent in his tentative occupational selections and predict his probability of success.

134. Given a specific work setting, the student completing level three will identify how the particular contributions of each person led to the successful completion of the task.

141. The student completing level four will evaluate his tentative occupational choice and demonstrate how his abilities and interests are appropriate for this choice.

142. Presented with various work attitudes and behaviors, the student completing level four will identify those which he feels are compatible with his career plan.

143. The student completing level four will identify his potential contributions to society through his occupational choice.

144. Having analyzed his personal values, the student completing level four will decide if the values he feels strongly about will have a positive or negative affect toward success in his occupational choice.

Goal 2. To develop favorable attitudes about the personal, social and economic significance of work:

Objectives:

211. Given a list of workers in a community, the student completing level one will explain how each worker contributes to society and how the attitudes and traditions of society affect his work.

212. Shown pictures and/or lists of jobs available in a given geographical area, the student completing level one will be able to determine how geography affects occupations.

213. Given tools and materials the student completing level one will use them to complete a task.

214. Given a description of various family units, the student completing level one will identify the contributions made by each member of the unit.

215. Having identified various workers, the student completing level one will be able to tell what they do.

216. Given a list of jobs familiar to him, the student completing level one will identify those that are related.

217. The student completing level one will be able to identify the skills necessary to complete a specific task presented to him.

221. Selecting several workers from a given society, the student completing level two will show how they interact and how their work benefits that society.

222. Given a description of a society in change, the student completing level two will identify the traditions, attitudes and needs, and describe their affect on jobs.

223. Given a specific geographic setting the student completing level two will list the jobs available in the area and identify the factors which created the jobs.

224. Given a sample project the student completing level two will identify the technology used in its completion.

225. Given a list of discoveries and inventions, the student completing level two will match them with changes that have resulted from them.

226. Given a simulated work situation, the student completing level two will identify the worker roles and tell how these roles may directly affect the student and other members of society.

227. Given a description of a specific occupation the student completing level two will cite examples of knowledge and skills which may be applied to another occupation.

228. Given a specific worker role the student completing level two will identify characteristics that should lead to success in that occupational area.

231. Given a specific job setting, the student completing level three will cite examples of technological change and decide if they have had a positive or negative effect on life.

232. Given a specific geographic setting the student completing level three will list the jobs available in the area, identify the factors which created the jobs and the changing economic trends involved.

233. Given a list of jobs the student completing level three will match the benefits provided to society by each job.

234. Given a list of jobs in broad occupational areas the student completing level three will identify traditions and attitudes of society that affect each job.

235. After analyzing and establishing his own list of occupational choices the student completing level three will rank his choices in order of priority.

236. After exploring the requirement of several occupational areas the student completing level three will identify those that relate to his future occupational choice.

237. Given a listing of school courses the student completing level three will select those that will provide the basic learnings necessary for his occupational choice.

241. Having made an occupational choice the student completing level four will list the economic incentives of that choice as they relate to his anticipated standard of living.

242. Given a list of needs, traditions and attitudes that have changed in his society, the student completing level four will identify how these changes will affect his occupational choice.

243. Given a situation in which the workers of an occupational area have withheld their services, the student completing level four will evaluate the consequences of this action.

244. Based on knowledge of his occupational choice, the student completing level four will cite examples of possible technological changes in this area and discuss their implications.

245. The student completing level four will select from a list of programs those that will assist in converting his occupational choice to reality.

246. The student completing level four will be able to make the necessary adjustment for job entry and/or further education.

Goal 3. To develop and practice appropriate career decision making skills:

Objectives:

311. Given a situation the student completing level one will make a choice and give the reasons for that choice.

321. Given a hypothetical situation, the student completing level two will identify the basic steps in the process of decision-making.

331. Given a hypothetical situation the student completing level three will make tentative career decisions utilizing the decision-making process.

332. Having explored selected career areas the student completing level three will make tentative occupational decisions based on knowledge, interests, abilities and values.

341. Having made a tentative career decision, the student completing level four will plan an educational and/or training program that will assist him in converting vocational preference into reality.

Goal 4. To develop the skills necessary to obtain employment and/or to pursue further education:

Objectives:

431. Given a variety of occupational settings the student completing level three will be able to relate academic training and skills to job performance.

432. Having made a tentative occupational choice the student completing level three will identify and select the school subjects which contain the specific knowledge required for his career choice.

441. Having made a tentative occupational choice, the student completing level four will obtain employment and/or will pursue further education.

SECTION V. CONCEPTUAL BASIS FOR EVALUATION

The strategy upon which the design for this project is built is called Information Based Evaluation. This strategy has been successfully implemented on some forty projects at both the state and local level over the past two years.

The concept of information utility is the overriding characteristic that differentiates "good" evaluation from "poor" evaluation and differentiates undisciplined data collection from information gathering. Judged by even modest standards of utility, educational research and evaluation has a pitifully poor record, and the unfortunate educational manager or policy-maker operating within the resultant void must sift through mountains of data for the kernels of information which are desired.

The crucial role that performance objectives play in program management is obvious; however, the question arises as to what place objectives should have in evaluation. The Information Based Evaluation approach views program objectives as one focus of evaluation activity, but by no means as the only focus.

In objective-based evaluation, the reference points are the program objectives. In information based evaluation, the reference points become the information users for the program and the information domains (needs). Capitalizing on these two reference points, a technique called domain analysis is used to define and focus the direction of the evaluation.

Information based evaluation should not be considered as "objective-free" evaluation. It recognizes the importance of program objectives, but only to the extent to which feedback on the objectives is considered important to information users. The overriding consideration is the type of questions about which relevant individuals desire answers. Priorities are established in both the information domain category (e.g., student cognitive growth) and the information user category (e.g., project director), and the evaluation resources are expended to meet these identified priorities. An additional check on the adequacy of evaluation information is the extent to which the information leads to action. If no relationship exists between information and action, then the adequacy and/or quality of the evaluation effort is in doubt.

Information based evaluation recognizes that an evaluation must be dynamic if it is to be responsive. Program objectives rarely change during the project year, thus the objectives-based evaluation is static and methodical in responding to the information requirements. Information based evaluation accepts the fact that information needs are fluid, and new questions are posed throughout the program cycle.

Information Requirements

The following requirements are the results of the design conferences and discussions held prior to the 1974-75 school year:

Information Users

The needs of the various information users were discussed at the design conferences. These users included the United States Office of Education (USOE), the state department of education, participating district personnel, teachers, parents, community groups and advisory council members.

It was agreed that rather than consider the needs of these users separately, the evaluation team would base its evaluation on one set of requirements encompassing the individual needs of all users.

Information Domains

The primary source of information domains is the Project Overview prepared by the Project Director. These requirements were discussed in detail at the design conferences, where additional areas were identified. The major information domains for the evaluation of the 1974-75 year of the Project are listed as follows:

1. Student Outcomes

   A. Self awareness
   B. Career decision making skills
   C. Awareness of and knowledge about work
   D. Achievement in basic skills

2. Process

   A. Career education activities at classroom and school levels
   B. Activities of resource teachers
   C. Placement and follow-up model
   D. Counselor-teacher interaction model
   E. Resource centers
   F. Curriculum infusion

Evaluation Constraints

1. Resources available for evaluation: Specified in Contract.

2. Student time: Sufficient for administration of a limited number of instruments to selected samples.

3. Teacher time: Sufficient for administration of student instruments and completion of limited "process" data collection forms.

4. Project Schedule: Enough time remaining in the 1974-75 project year to answer the specified evaluation questions and collect data relative to the overall Project goals.

5. Availability of instruments: Student outcomes measured using commercially available instruments, with the exception of a couple of instruments still in the developmental stage. Results from the previous year's evaluation were made available to the evaluation team, and it was expected that standardized achievement test data would be provided where necessary to answer the specified evaluation questions. The process dimensions of the evaluation required the development of certain data collection instruments by the evaluation team.

Evaluation Questions

Based on the needs of information users, the information domains of interest and the evaluation constraints, a set of interest and the evaluation constraints, a set of evaluation questions was developed, as follows:

1. How does the self concept of students participating in various components of the project compare with students nationally and with other students locally?

2. How does the awareness of and knowledge about work of students participating in various components of the project compare with students nationally and with other students locally?

3. How do the career decision-making skills of students participating in various components of the project compare with students nationally and with other students locally?

4. To what extent were students who participated in the project and who left the project schools placed in paid occupations, in further education, or in unpaid work that was consistent with their current career choice?

5. To what extent has the number and type of job preparation opportunities been expanded for young people in grades 10 through 14?

6. What financial resources from Section 142(c) of Part D of P. L. 90-576 were expended for the current project year, by budget category?

7. To what extent were project activities carried out according to schedule?

8. What factors caused changes in scheduled activities?

9. What are the major "process" dimensions of the project, as implemented this year?

10. What are the relationships among the student outcomes and the various process dimensions being implemented this year?

11. To what extent was the placement and follow-up model implemented this year?

12. To what extent was the counselor-teacher interaction model implemented this year?

Data Base Structure and Contents

The Project evaluation data base consists of those elements needed to answer the specified evaluation questions and to provide baseline information relative to the three-year project goals. There are two major components: a student file and a process file.

The student file includes demographic data and the results of the various student assessment instruments, including data from the previous year.

The process file includes the data collected to answer the process and descriptive evaluation questions.

All data in the data base will be provided to the Project Director after completion of the year-end evaluation report.

Instrumentation

The major instruments used in the evaluation of the 1974-75 year of the project were as follows:

1. Self Observation Scales (SOS) - A measure of student self concept: At the primary level (K-3), the scales consist of Self Acceptance, School Affiliation, Social

Maturity, Self Security and Achievement Motivation. At the intermediate level (4-6), the scales consist of the preceding five plus Social Confidence, Teacher Affiliation and Peer Affiliation. At the secondary level (7-12), scales include Self Security, Social Maturity, Peer Affiliation, Teacher Affiliation, Family Affiliation, School Affiliation, Social Confidence, Self Assertion, and Self Acceptance.

2. Career Maturity Inventory - A measure of the maturity of attitudes and competencies that are crucial in realistic career decision making: There are two parts: an Attitude Scale and a Compentency Test. The instrument is appropriate for grades 7-12.

3. Career Education Questionnaire - A measure of the extent to which students are both aware of and can recognize a wide range of concepts concerning the world of work. The primary level (1-3) and the intermediate level (4-6) was to be used in this evaluation.

4. Decision Making Scale - A developmental set of instruments which measure the cognitive and affective dimensions of the decision-making process. The secondary level (7-12) was used in the spring testing.

5. Teacher Survey - An instrument developed by the evaluation team to collect information from teachers relative to their attitudes toward and their activities associated with the career education program.

6. Other Process Data Collection Instruments - Various instruments were developed by the evaluation team to collect process data for the current year of the Project.

Population Selection Procedures

Students

Students were selected for spring administration of the various student assessment instruments as follows: The sampling unit was the teacher; classes were selected from participating schools for spring testing on the basis of specific identified project activities, as determined from the Teacher Survey. Four classes from each of the four areas at each of the grades 3, 6, 9, and 11 were included in the sample, for a total of 64 classes.

A more limited sample of students at grades 3 and 6 was given the Self Observation Scales in the early part of the school year, to provide baseline data. A total of 716 students were in this sample. These students were included in the spring testing.

Teachers

Based on information available in project records regarding career education activities being implemented this year, teachers in participating schools were selected for the Teacher Survey.

Data Collection Procedures

Students

As stated above, the Self Observation Scales were given during the early part of the school year to a total sample of 716 students in grades 3 and 6. The remaining student assessment activities were carried out in the spring, as shown in the following table.

Table 2. Instrument Administration by Grade Level, Spring 1975

Instrument	Grade Level			
	3	6	9	11
Self Observation Scales	X	X	X	X
Career Maturity Inventory (Parts 2,3, and 4)			X	X
Decision Making Scale			X	X

Teachers

The Teacher Survey was administered in the spring prior to the student assessment activities.

Data Analysis Techniques

In answering the evaluation questions, a number of data analysis techniques were used. For a substantial number of the questions simple descriptive statistics suffice; however, some of the more complex questions required more complex analysis techniques. For example, questions regarding the relationships among self concept, decision-making skills and achievement require multivariate techniques.

IBEX has developed a comprehensive package of computer programs to meet its research and evaluation needs, and the entire student data file was placed on magnetic tape for analysis and reporting of results.

Reporting Requirements And Procedures

Because of the variety of audiences that will make use of this evaluation information, the way the information is presented becomes vitally important; likewise, the presentation format must be suited to presenting considerable quantities of data in a relatively small space and yet be easily and quickly interpreted. IBEX has had excellent experience with a profile or pattern technique and will use this approach where possible in presenting the results of this evaluation. In addition to the ease of presentation, this technique lends itself to a series of analysis strategies (pattern analysis) that are also easily presented and interpreted.

SECTION VI. EVALUATION RESULTS

This section is organized around major information domains or evaluation areas of interest. These domains are: (1) student self concept, (2) student decision making skills, (3) student relationships with the world of work, and (4) teacher attitudes toward Career Education and the Project.

Student Self Concept

Between the ages of five and twelve, the self concept begins to crystalize. During this period (termed the "latency period" by many authors), the child matures considerably in the physical, cognitive and affective areas. He confronts his environment with an increasingly stable set of feelings, attitudes and behaviors which are based, to a large extent, on his self concept which is, likewise, stabilizing. As the child becomes older he becomes more sure of what he likes and dislikes, who he likes and dislikes, what he enjoys doing and what he dislikes doing, how he sees his future and what he will be doing in this future. He begins to plan and his aspirations and hopes tend to be consistent with the way he values himself, which, in turn, is dictated in large part by how he perceives others value him.

Although the early school years are characterized by a crystalization of self, the child also begins to differentiate. The self concept of the five-year-old is a relatively simple construct. The five-year-old views most things as a dichotomy: people are good or bad, food is good or bad, places are happy or sad places to be, other children are friendly or mean. As the six-year-old enters first grade, new demands are placed on him. He is expected to interact with unfamiliar children and authority figures and, to a great extent, his well being is determined by how successfully he negotiates these new demands. It is these early school years that have a truly profound impact on the child's self concept development. Never before has he been consistently, objectively and sometimes coldly, judged by peers and adults. He is unable to separate himself from his actions so that reprimands and criticism often become viewed as direct threats to self. With this background information we now turn to the correlates of a positive and negative self concept, respectively.

The Positive Self Concept*

Children with positive self concepts are, first of all, confident about their ability to meet everyday problems and demands. They are confident about their relationships with other people and take pleasure in mutual interdependence, in needing others and in being needed. Autonomy and independence are beginning to take shape. Children with strong self concepts view themselves as desirable and valuable contributors to the well being of those around them. They see themselves as deserving of attention and love and feel they are capable of reciprocating. They compare themselves favorably with their peers and feel that authority figures are supportive and interested in them as individuals. These children tend to be comparatively independent and reliable. These qualities may stem from their feelings of sufficiency and adequacy in new and challenging situations. They are relatively free from anxiety, nervousness, excessive worry, tiredness and loneliness. They report being happy with the way they look and would not change their appearance if they could.

Children with a positive view of themselves enjoy interacting with their peers and see themselves as on a par with their peers in most situations, while occasionally professing superiority in certain areas. They recognize the social consequences of certain "asocial" actions and see the benefits of give-and-take in social interactions. These children are able to admit that they make mistakes and that they sometimes hurt other people, but they apparently do not view these admissions as major threats to self.

Behaviorally, these children are seldom designated as problem children. They usually appear comparatively calm, keep their hands to themselves and, although they are frequently competitive, they express aggression when external considerations warrant aggressive behavior. They express dissatisfaction with their own poor performances but relatively seldom make self deprecating remarks. They react positively to constructive criticism, can accept praise well, and derive obvious pleasure from a job well done.

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* The profiles for a "positive" and "negative" self concept are drawn from the results of the national validation and norming of the Self Observation Scales.

Scholastically, children with positive self concepts tend to be above expectation in reading and mathematics. They tend to attain higher scores on standardized achievement tests than would be predicted from ability tests. These children are positive toward school and view it as a happy, worthwhile place to be.

The Negative Self Concept

Children with poor self concepts are insecure and pessimistic about their ability to meet everyday problems and demands, and they are unsure about their relationships with others. They often tend to be either overly dependent and withdrawn or overly aggressive with apparently minimal overt needs for social interaction and, in each case, growth toward autonomy appears stunted and retarded. These children view themselves as undesirable and, through their often inappropriate behavior (which is, although inappropriate, usually quite consistent with the way the children feel about themselves), they are regularly reinforced in these feelings.* They report not being needed by significant others and do not feel that others care about them as individuals. They compare themselves unfavorably with their peers, and frequently report being inferior to their peers in age-appropriate activities. Authority figures represent a threat to children with poor self concepts.

These children are threatened in social interactions and prefer to play with younger children. They report a desire to dominate in peer-oriented activities, i.e., always wanting to be first or always wanting to be the leader, and yet, would prefer to play alone if given a choice. They tend to be quitters and are satisfied with poor performance (again, poor performance is consistent with the way these children view themselves). These children find it difficult to admit to even common mistakes and are quite insensitive to other people's feelings.

Behaviorally, these children are frequently labeled as problem children. The acting out, aggressive, verbally disruptive child has a markedly lower self concept than does the "healthy" child. Likewise, the insecure, withdrawn, quiet child also has a low self concept, but his inadequacies are manifested differently from the aggressive child. These children respond negatively to criticism and, surprisingly, they often respond inappropriately or even negatively to praise because positive feelings are inconsistent with the way these children feel about themselves.

* Modifying the truism from the financial world that "the rich get richer and the poor get poorer", we can say that children with strong self concepts get positive reinforcement and, thus, get stronger, while those with weak self concepts get negatively reinforced and thus, get weaker.

Scholastically, children with poor self concepts tend to be below average in reading and mathematics. They tend to obtain lower scores on standardized achievement tests than would be predicted from ability tests. These children are negative toward school and view it as an unhappy place to be.

As a measure of children's self concept, the Self Observation Scales (SOS) were used in this evaluation. The SOS is a direct self report, group administered instrument comprised of fifty items at the primary level (K-3) and sixty items at the intermediate level (4-6).

The Primary level of the SOS measures five dimensions of children's self concept. Each scale is labeled in a positive manner with high scores being most characteristic of the scale name.

The scales are as follows:

1. Self Acceptance: Children with high scores view themselves positively and attribute to themselves qualities of happiness, importance, and general competence. They see themselves as being valued by peers, family and teachers. Children with low scores see themselves as unhappy, lacking in general competence and as of little importance to others.

2. Social Maturity: Children with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They have learned the importance of such notions as "fair play", "sharing", "perserverance", "helpfulness", and "generosity". Children with low scores on this scale have not learned these notions and are likely to evidence behaviors that most adults would characterize as selfish, inconsiderate or immature.

3. School Affiliation: Children with high scores view school as a positive influence in their lives. They enjoy going to school, and they enjoy the activities associated with school. Children with low scores view school as an unhappy place to be. They do not enjoy most school-related activities and are negative about the importance of school in their lives.

4. Self Security: Children with high scores report a high level of emotional confidence or stability. They feel that they are in reasonable control of the factors that affect their lives and spend little time worrying over possible troubles. Children with low scores on this scale worry a great deal. They are concerned that something bad may happen and report feelings of nervousness.

5. Achievement Motivation: This is a special scale, relating achievement and ability to self concept. High scores indicate increased probability that the child will achieve well relative to ability; low scores indicate increased probability that the child will not achieve as well as might be expected on the basis of his ability. This scale is considered to be experimental, and we recommend that its use for individual assessment be deferred pending the results of our current program of confirmatory analyses.

The Intermediate level of the SOS measures the same five dimensions of children's self concept and adds three additional scales, as follows:

1. Social Confidence: Children with high scores on this scale feel confident of their ability to relate successfully in social situations. They feel confident that they can make friends easily and that they are valued and enjoyed by their friends. Children with low scores have difficulty making friends, do not feel valued by others and see other people as being more socially adept than themselves.

2. Teacher Affiliation: Children with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Children with low scores on this scale see the teacher as arbitrary, inconsiderate of children, and/or as a source of emotional pain.

3. Peer Affiliation: Children with high scores on this scale consider their relationships with other children to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other children. Children with low scores do not see their peer relationships as an asset. They see other children as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily.

The Junior and Senior High levels of ths SOS were also used in this evaluation. The scale descriptions of these instruments follow.

The Junior Level of the Self Observation Scales is designed for use at grades 7-9. Form A measures nine dimensions of students' affective behavior, while Form B measures the same dimensions, less the Family Affiliation Scale. Each scale is labeled in a positive manner with high scores being most characteristic of the label. The scales are as follows:

1. Self Assertion: Students with high scores view themselves as possessing leadership qualities and as being respected by others for these qualities. The emphasis on this scale is on how students believe others view them. Students with low scores see themselves as lacking leadership ability and assertiveness. Three items highly related to this scale are: Other students look to me for leadership; Other students look to me for ideas; In discussions with my friends, my point of view usually wins.

2. Self Acceptance: Students with high scores view themselves positively and attribute to themselves qualities of basic competence, self satisfaction and happiness. They see themselves as being good at a lot of activities and as being confident about their future success. Students with low scores are unsatisfied with their performance and capabilities and are unsure of their futures. Three items highly related to this scale are: I do a lot of things well; I think I will be successful in life; When I look in the mirror I like what I see.

3. Self Security: Students with high scores report a high level of emotional confidence or stability. They report being in control of factors affecting their lives and worry very little about either specific or non-specific fears. Students with low scores on this scale worry a great deal. They report nervousness about non-specific performance expectations and often feel that they worry more now than in the past. Three items highly related to this scale are: I often find myself worrying about something; At times I lose sleep over worry; I worry about losing my friends.

4. Social Maturity: Students with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They are comfortable around younger children and show empathy in their social relations. They believe in saying what they feel and understand the importance of listening to others. Students with low scores on this scale are socially self centered, lack responsiveness to other people's feelings and are reticent to express their own feelings. Three items highly related to this scale are: When I feel like it, I cry; Younger kids usually bore me; Most of the time I feel sorry for someone who is hurt.

5. Social Confidence: Students with high scores on this scale feel confident of their ability to relate in social situations. They feel confident about their ability to make and keep friends and believe that other people value their friendship. Students with low scores have difficulty making friends and lack confidence in social situations.

Three items highly related to this scale are: People who are like me don't have a good chance to be successful; Most of my friends don't care what I think; If people knew what I am really like, they would steer clear of me.

6. School Affiliation: Students with high scores view school positively, enjoy going to school and enjoy the activities associated with school. Students scoring low on this scale see school as a "hassle" that keeps them from doing what they want to do. Three items highly related to this scale are: I like to stay home from school; This school is like a jail; School frequently keeps me from doing what I want to do.

7. Teacher Affiliation: Students with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Students with low scores see the teacher as arbitrary, inconsiderate of children and/or as a source of emotional pain. Three items highly related to this scale are: My teachers like to help me; When I do something wrong, my teachers correct me without hurting my feelings; My teachers expect too much of me.

8. Peer Affiliation: Students with high scores on this scale consider their relationships with other students to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other students. Students with low scores do not see their peer relationships as an asset. They see other students as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily. Three items highly related to this scale are: I make friends easily; Other students are usually fair to me; I can count on my friends when I am in trouble.

9. Family Affiliation: Students with high scores on this scale report a positive relationship with their parents and family. They see their parents as helping in time of need and as being understanding. Students with low scores don't see home as a place to go when troubles begin. They do not feel trusted by their family and, likewise, do not feel that they treat their family as well as they should. Three items highly related to this scale are: My parents usually understand my problems; My parents do all they can for me; I treat my parents as well as I should.

The Senior Level of the Self Observation Scales is designed for use at grades 10-12. Form A measures nine dimensions of students' affective behavior, while Form B measures the same dimensions, less the Family Affiliation Scale. Each scale is labeled in a positive manner with high scores being most characteristic of the label:

1. Self Assertion: Students with high scores view themselves as possessing leadership qualities and as being respected by others for these qualities. The emphasis on this scale is on how students believe others view them. Students with low scores see themselves as lacking leadership ability and assertiveness. Three items highly related to this scale are: Other students look to me for leadership; Other students look to me for ideas; I enjoy talking in front of a group of people.

2. Self Acceptance: Students with high scores view themselves positively and attribute to themselves qualities of basic competence, self satisfaction and happiness. They see themselves as being good at a lot of activities and as being confident about their future success. Student with low scores are unsatisfied with their performance and capabilities and are unsure of their futures. Three items highly related to this scale are: I am a happy person; I think I will be successful in life; I am proud of most things I do.

3. Self Security: Students with high scores report a high level of emotional confidence or stability. They report being in control of factors affecting their lives and worry very little about either specific or non-specific fears. Students with low scores on this scale worry a great deal. They report nervousness about non-specific performance expectations and often feel that they worry more now than in the past. Three items highly related to this scale are: I have more fears than most people; At times I lose sleep over worry; I worry about losing my friends.

4. Social Maturity: Students with high scores on this scale know how they are supposed to think and feel in a variety of social situations. They are comfortable around younger children and show empathy in their social relations. They believe in saying what they feel and understand the importance of listening to others. Students with low scores on this scale are socially self centered, lack responsiveness to other people's feelings and are reticent to express their own feelings. Three items highly related to this scale are: I am able to listen and be aware of the needs of others; Younger kids usually bore me; Most of the time I feel sorry for someone who is hurt.

5. Social Confidence: Students with high scores on this scale feel confident of their ability to relate in social situations. They feel confident about their ability to make and keep friends and believe that other people value their friendship. Students with low scores have difficulty making friends and lack confidence in social situations. Three items highly

related to this scale are: People who are like me don't have a good chance to be successful; Most of my friends don't care what I think; If people knew what I am really like, they would steer clear of me.

6. School Affiliation: Students with high scores view school positively, enjoy going to school and enjoy the activities associated with school. Students scoring low on this scale see school as a "hassle" that keeps them from doing what they want to do. Three items highly related to this scale are: I like to stay home from school; This school is like a jail; School frequently keeps me from doing what I want to do.

7. Teacher Affiliation: Students with high scores on this scale like their teachers. They see the teacher as helpful, attentive, understanding and generous. Students with low scores see the teacher as arbitrary, inconsiderate of children and/or as a source of emotional pain. Three items highly related to this scale are: My teachers like to help me; When I do something wrong, my teachers correct me without hurting my feelings; My teachers expect too much of me.

8. Peer Affiliation: Students with high scores on this scale consider their relationships with other students to be both of high quality and of considerable importance to them. They see themselves as approved of and valued by their peers. They like to be with other students. Students with low scores do not see their peer relationships as an asset. They see other students as unfriendly, they have few friends, and do not accept the responsibilities of friendship easily. Three items highly related to this scale are: Most people are much better liked than I am; I feel left out a lot; I can count on my friends when I am in trouble.

9. Family Affiliation: Students with high scores on this scale report a positive relationship with their parents and family. They see their parents as helping in time of need and as being understanding. Students with low scores don't see home as a place to go when troubles begin. They do not feel trusted by their family and, likewise, do not feel that they treat their family as well as they should. Three items highly related to this scale are: My parents usually understand my problems; My parents do all they can for me; I treat my parents as well as I should.

Scoring of the SOS is based on national norms. For each scale, a child receives a standard (T) score, representing a distribution with a mean of 50 and a standard deviation of 10. National percentile and stanine equivalents of this standard score also are provided. Responses to individual items are not given.

The Decision Making Scale is a new instrument developed by IBEX to guage the decision making processes of students. It has been normed nationwide, but some fine tuning work yet remains to be done. Scoring of the Decision Making Scale (DMS) is based on national norms. For each scale, a student receives a standard score (T score), representing a distribution with a mean of 50 and a standard deviation of 10. Responses to individual items are not given. The instrument is analyzed as six subscales, the descriptions of which are as follows:

1. Decision Integrity: Students with high scores view themselves positively and have a great deal of confidence in their ability to make sound decisions. Students with low scores perceive with some uncertainty the soundness of their decisions. The emphasis on this scale is on how students believe others view the students' decisions and the outcome of the students' decisions. Three items highly related to this scale are: Do you worry a good deal about the effects of your reactions on others?; Do you worry a good deal about what others think of you?; Do you worry a lot about your mistakes?

2. Group Integration: Students with high scores view themselves as vital members of a group. The group respects and solicits input from the individual student in the decision-making process. Students with low scores do not see themselves as a member of a group and have difficulty in group dynamics. Three items highly related to this scale are: Do people care what you think?; Do you keep your problems to yourself?; Do most people understand you?

3. Leadership/Assertiveness: Students with high scores view themselves at the centroid of the decision-making process. They are confident about the quality, validity and reliability of their decisions and the processes which enabled them to reach those decisions. Students with low scores are not so sure about either. Three items are highly related to this scale: Do your friends consider you to be a leader?; Do you enjoy doing things more if you are the leader?; In arguments, does your point of view usually win?

4. Independence/Responsibility: Students with high scores would rather make decisions for themselves because they see themselves as the ultimate beneficiary of those decisions. They have a clear set of values and are honest in their perceptions of themselves and others. Students with low scores would rather let others make decisions in which they have little confidence in the outcome. Four items highly related to the scale are: Would you rather let someone else decide important things for you?; Do you like to decide things for yourself?; Can you be depended on?; Do you have a clear feeling of what's right and what's wrong?

5. Task-Decision Insularity: Students with high scores on this scale have a tendency to vacillate in either task attendance or decision-making. Extrinsic factors that impinge on a situation are often the causal agents that cause this student to act. The student with low scores is a self starter who acts with decisiveness and alacrity. Four items highly related to this scale are: Do you hate to be told what to do?; Do you start a lot of things that you never finish?; Do you try to put off big decisions as long as possible?; Do you try to avoid making difficult decisions?

6. Logical Entropy: Students with high scores on this scale plan their decisions very carefully with an attempt to integrate all perceived factors that influence the situation. The null set does not exist as a realistic option. The student with low scores on this scale will accept a problem as it exists and make limited attempts to solve it. The low-scoring student sees himself passively rather than actively involved in a situation. Four items highly related to this score are: Plan your choice carefully, or let someone else decide for you; Pick the first decision that comes to your mind or carefully think the situation through; Follow your conscience or put off making the decision; Choose without thinking about it or use your common sense.

The Decision Making Scale was administered to students in Anne Arundel County during the spring of 1975. The number of usable respondents were as illustrated in Table 3, by Area, Grade, and sex.

Table 3. Number of Respondents, Decision-Making Scale Administration, Spring 1975, By Area, Grade, and Sex, Anne Arundel County

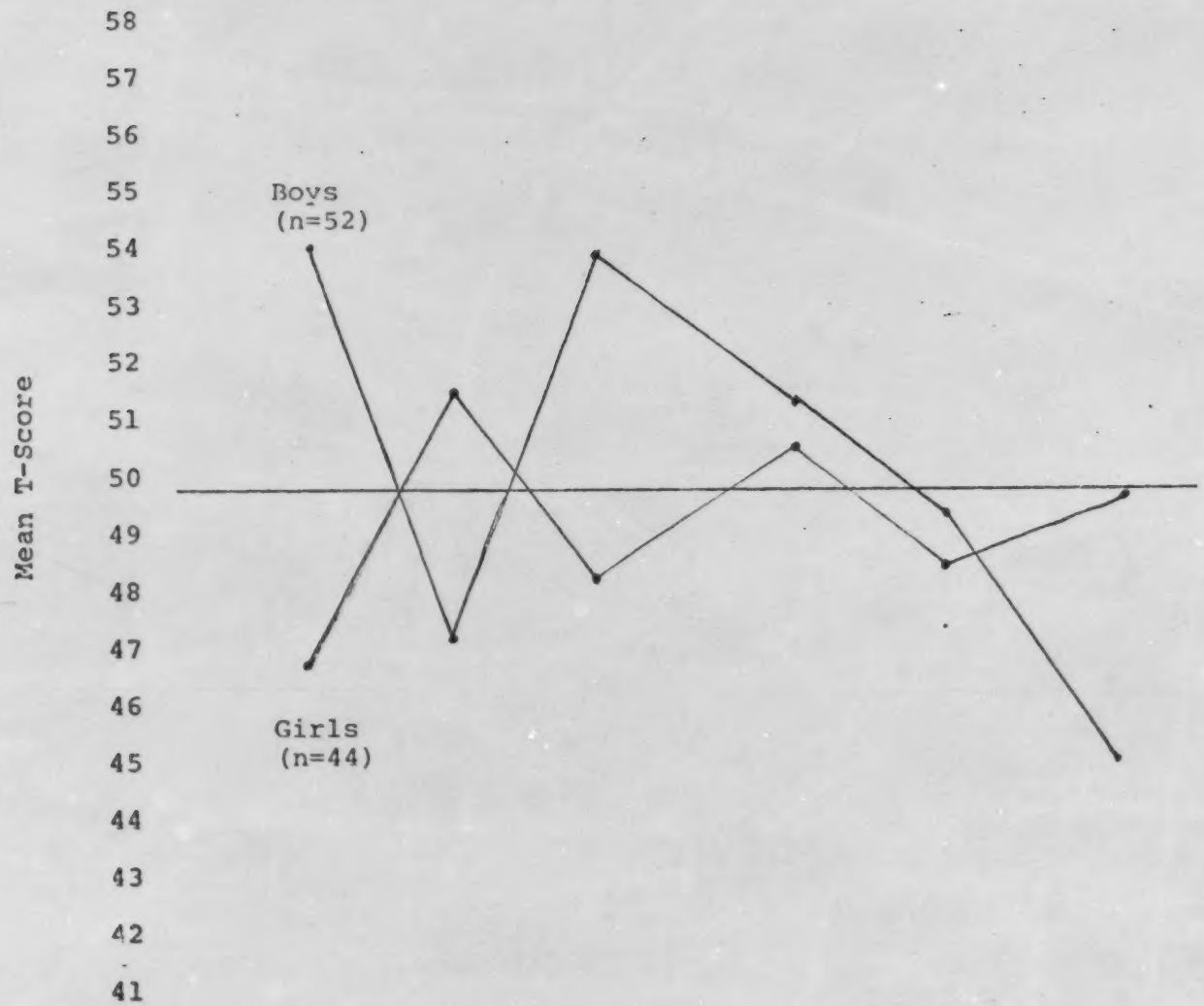
Area	Grade/Total		Sex: Male	Sex: Female	Area Total
I	9	96	52	44	166
	11	70	30	40	
II	9	99	45	54	163
	11	64	41	23	
III	9	94	46	48	141
	10	17	5	12	
	11	11	6	5	
	12	19	12	7	
IV	9	103	61	42	103
				Total	573

The results of the spring 1975 administration of the Decision-Making Scale will be presented by area.

Area I

Table 4 (See Appendix) and Figure 1 illustrate the results of the ninth grade respondents. Sex differences are apparent, particularly in Decision Integrity (boys>girls), Leadership/Assertiveness (boys>girls), and Logical Entropy (girls>boys). There is little consistency to the sex pattern. As a group, the ninth graders were close

Figure 1. Results of the Decision Making Scale, Spring 1975, Area I, Grade 9, By Sex, Anne Arundel County, Total n=96



to average on all scales except Logical Entropy, in which the group was somewhat low. Boys were high on Decision Integrity and Leadership/Assertiveness; girls were somewhat low on Decision Integrity and close to average on the other five scales.

As may be seen from Table 5 (See Appendix) and Figure 2, particularly, the pattern of mean scores for the eleventh grade student in Area I was similar to that for the ninth graders. Boys, again, were noticeably higher than girls on Decision Integrity and Leadership/Assertiveness. Girls were low on Decision Integrity and Leadership/Assertiveness; high on Logical Entropy. As a group, the eleventh graders were about average on Group Integration, Decision Integrity and Independence/Responsibility; somewhat low on Leadership/Assertiveness; and somewhat high on Logical Entropy, as compared to the average.

Area II

The ninth grade results are illustrated in Table 6 (Appendix) and depicted graphically in Figure 3. Sex differences are apparent on certain scales, but the pattern is not consistent. Boys were higher than girls in Decision Integrity and Leadership/Assertiveness. Girls were higher than the boys in Group Integration and somewhat higher in Logical Entropy. As compared to the average, girls were high in Group Integration, low in Decision Integrity, and somewhat low in Leadership/Assertiveness. Boys were somewhat high in Decision Integrity and Leadership/Assertiveness, and low in Logical Entropy.

As may be deduced from studying Table 7 (Appendix) and Figure 4, the sex pattern for the eleventh grade

Figure 2. Results of the Decision Making Scale, Spring 1975, Area I, Grade 11, By Sex, Anne Arundel County, Total n=70

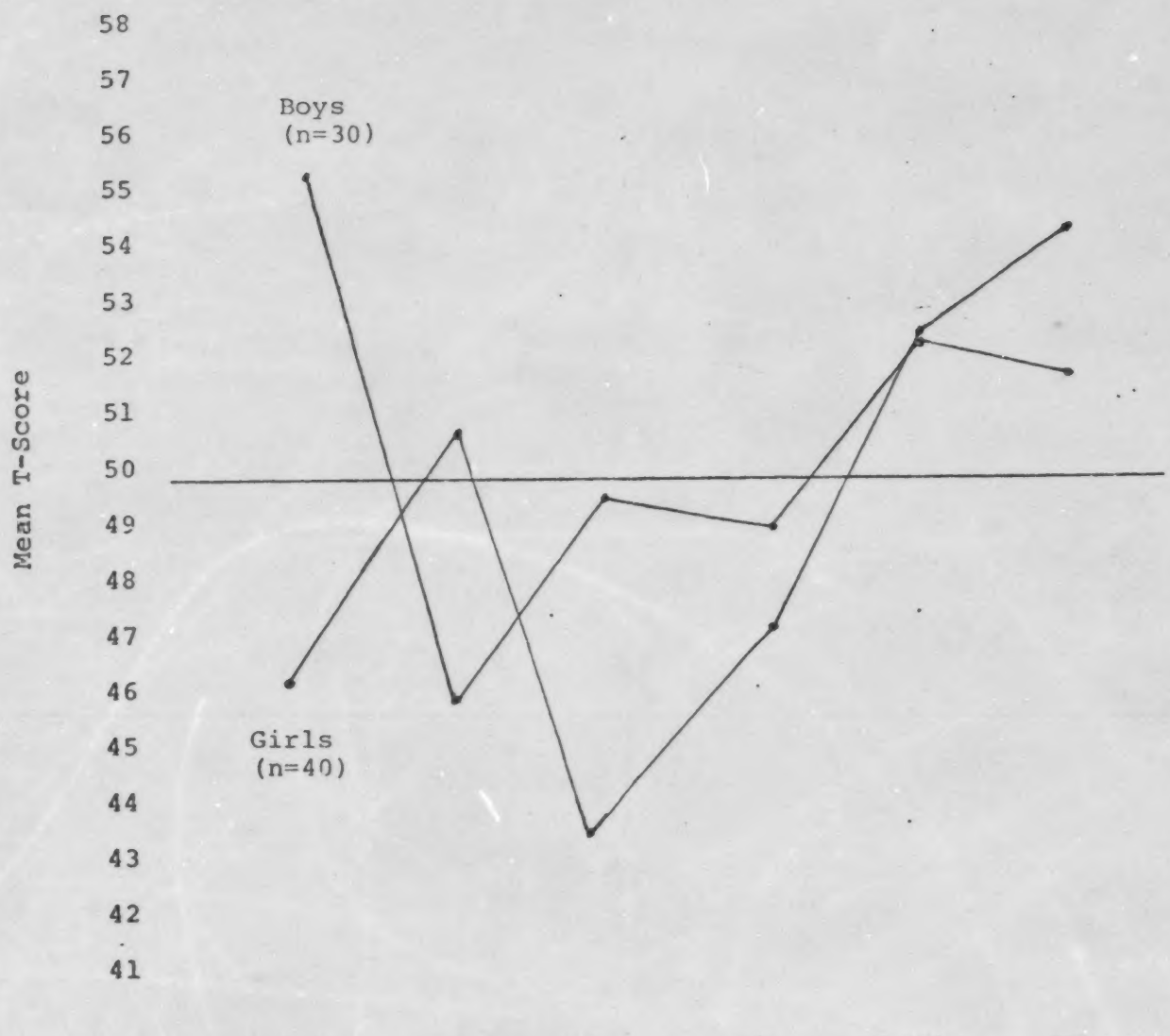


Figure 3. Results of the Decision Making Scale, Spring 1975, Area II, Grade 9, By Sex, Anne Arundel County, Total n=99

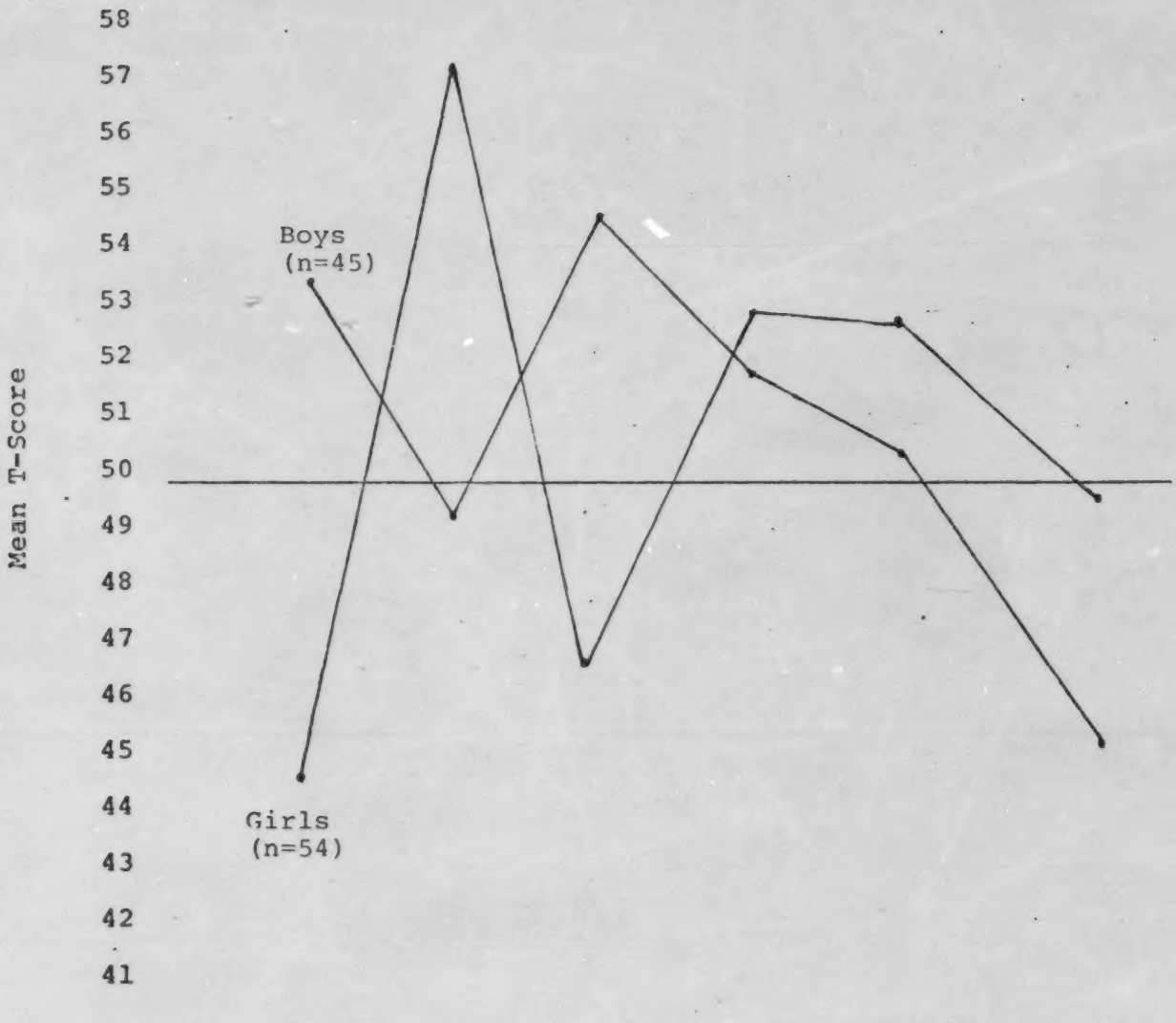
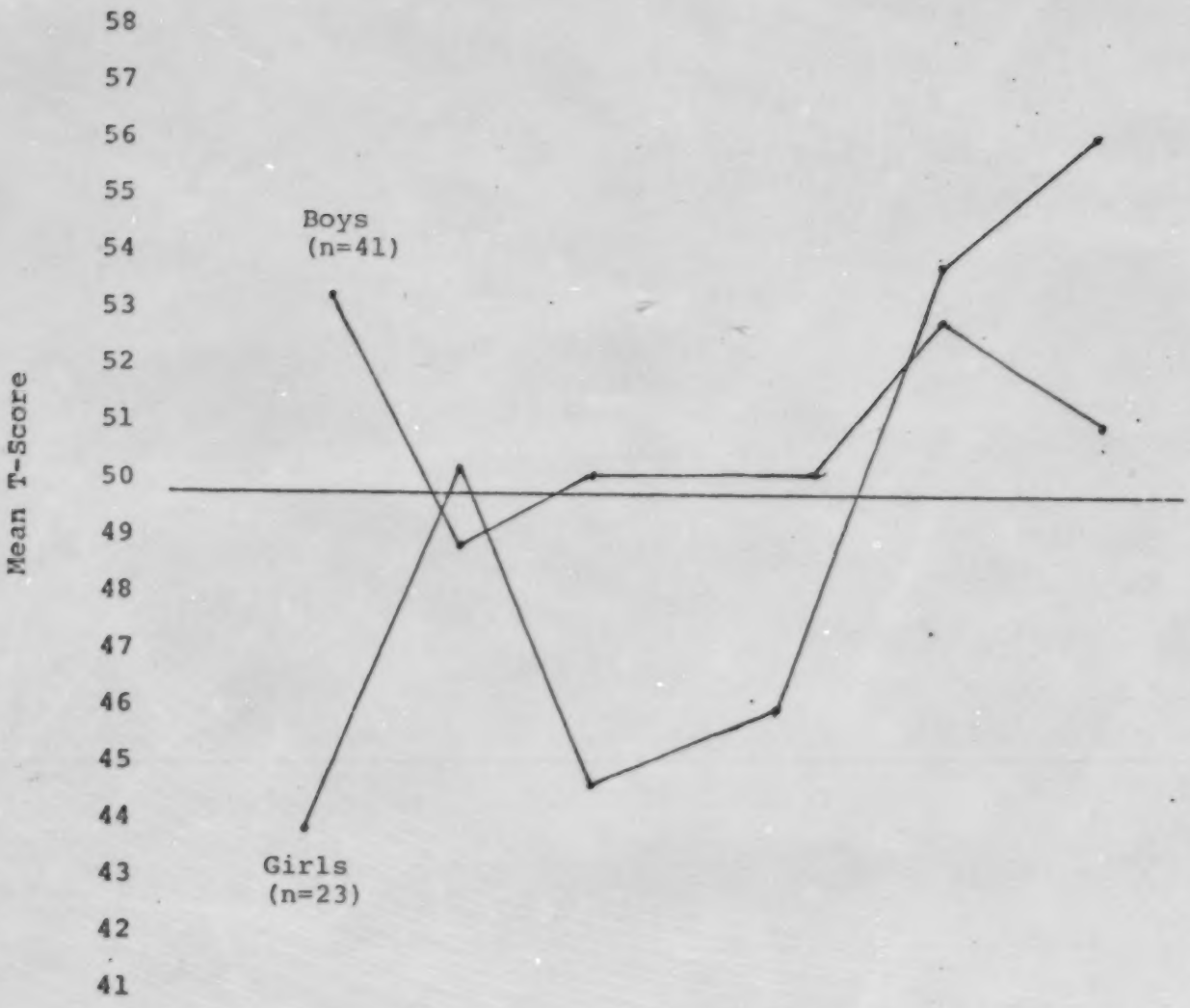


Figure 4. Results of the Decision Making Scale, Spring 1975, Area II, Grade 11, By Sex, Anne Arundel County, Total n=64



students were somehwat different from that of the ninth graders. Boys were not only generally higher than girls in Decision Integrity and Leadership/Assertiveness, but also in Independent/Responsibility. Girls were low in Decision Integrity, Leadership/Assertiveness, and (to a lesser extent) Independence/Responsibility. Boys were somewhat high in Decision Integrity. Girls were somewhat low in Task-Decision Insularity (low score desirable), and high in Logical Entropy. Boys were close to the average on five of the six scales (Decision Integrity the exception).

Area III

The ninth graders in Area III were close to the average on all six scales, as may be seeen in Table 8 (Appendix) and Figure 5, that is, as a group. Girls generally scored somewhat higher than boys (exception Decision Integrity and Task-Decision Insurlarity). Girls were somewhat high in Group Integration and somewhat low in Task-Decision Insularity. Boys were somewhat low in Group Integration.

The results from the tenth, eleventh, and twelfth graders for Area III are alternated by the small number of respondents per grade (17, 11, and 19, respectively). The results for the tenth grade are shown in Table 9 (Appendix) and Figure 6, the eleventh grade in Table 10 (Appendix) and Figure 7, and the twelfth grade in Table 11 (Appendix) and Figure 8. The patterns reflected in the figures are markedly different from previous results. Sex patterns seen before did not hold up consistently. There are simply more "peaks and valleys" across the three grade depictions, and this is viewed as an artifact of the small number of students for whom scores on the instrument were available.

Area IV

The results for the ninth grade students are illustrated in Table 12 (Appendix) and Figure 9. Sex differences are apparent in Decision Integrity (boys>girls), Task-Decision Insularity (boys>girls) and Logical Entropy (girls>boys). Viewed as a group, the students were somewhat high in Group Integration and Independence/Responsibility; somewhat low on Logical Entropy; and abour average (in terms of norming expectation) on the other scales. Girls

Figure 5. Results of the Decision Making Scale, Spring 1975, Area III, Grade 9, By Sex, Anne Arundel County, Total n=94

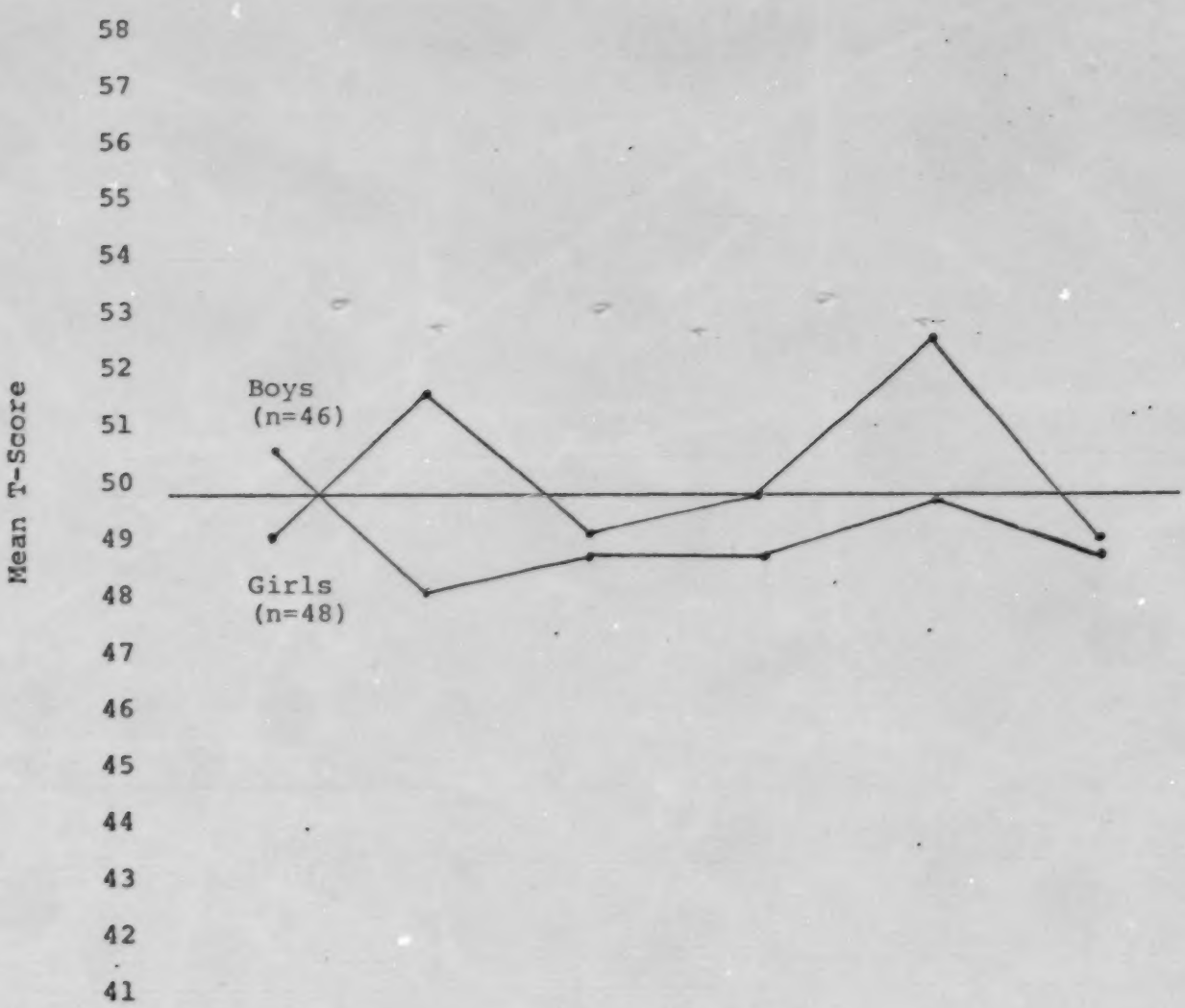


Figure 6. Results of the Decision Making Scale, Spring 1975, Area III, Grade 10, By Sex, Anne Arundel County, Total n=17

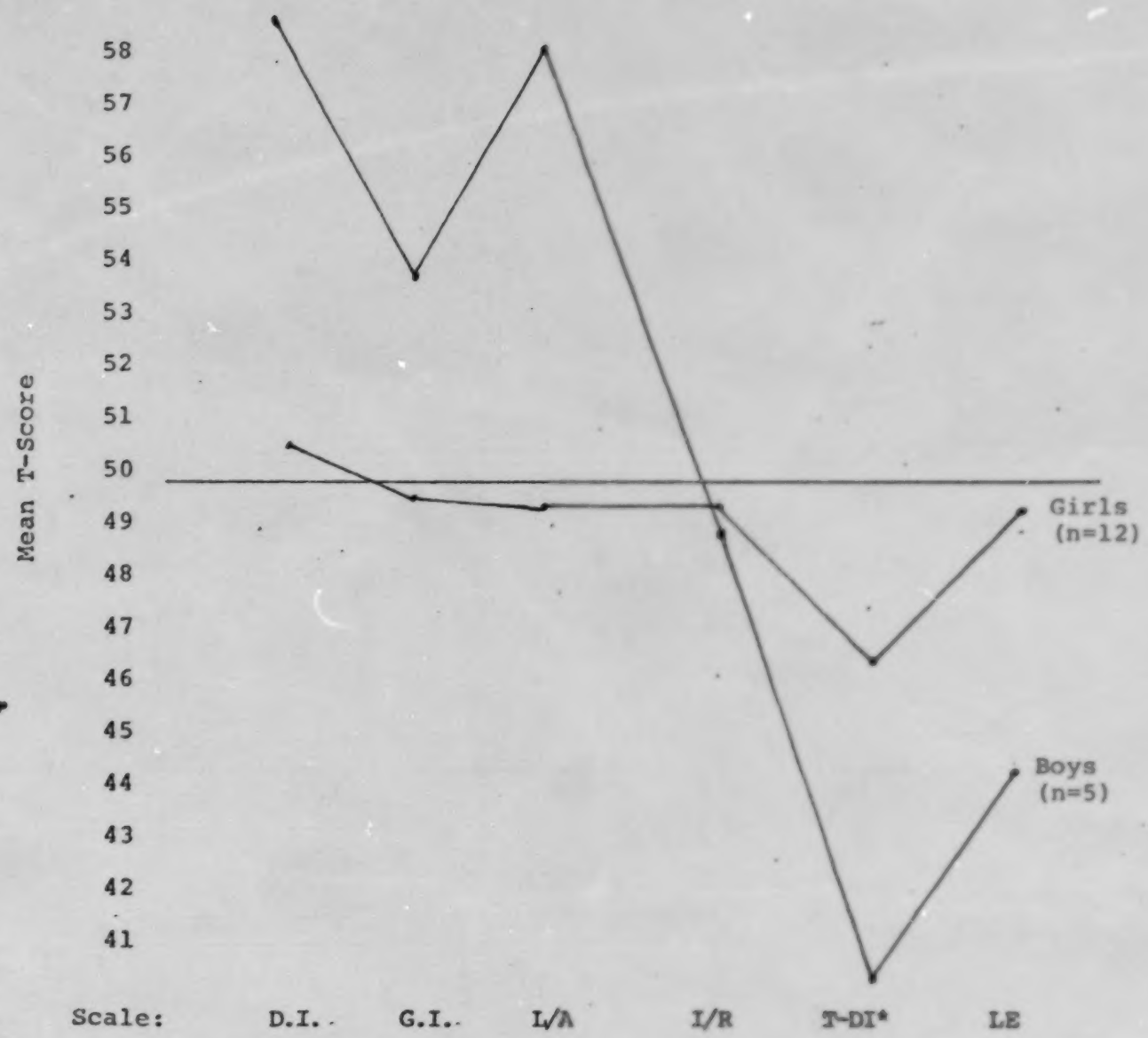


Figure 7. Results of Decision Making Scale, Spring 1975, Area III, Grade 11, By Sex, Anne Arundel County, Total n=11

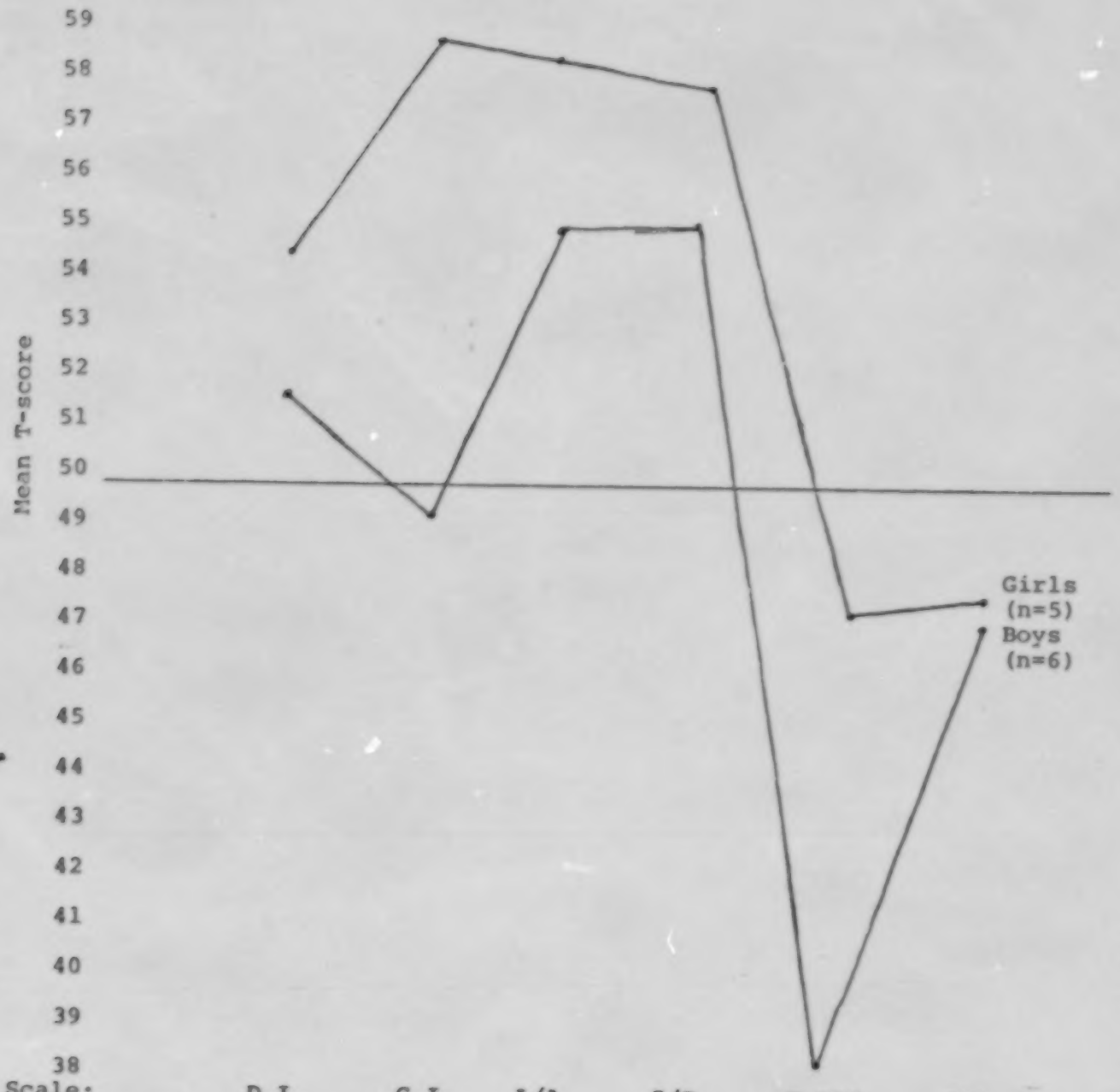


Figure 8. Results of the Decision Making Scale, Spring 1975, Area III, Grade 12, By Sex, Anne Arundel County, Total n=19

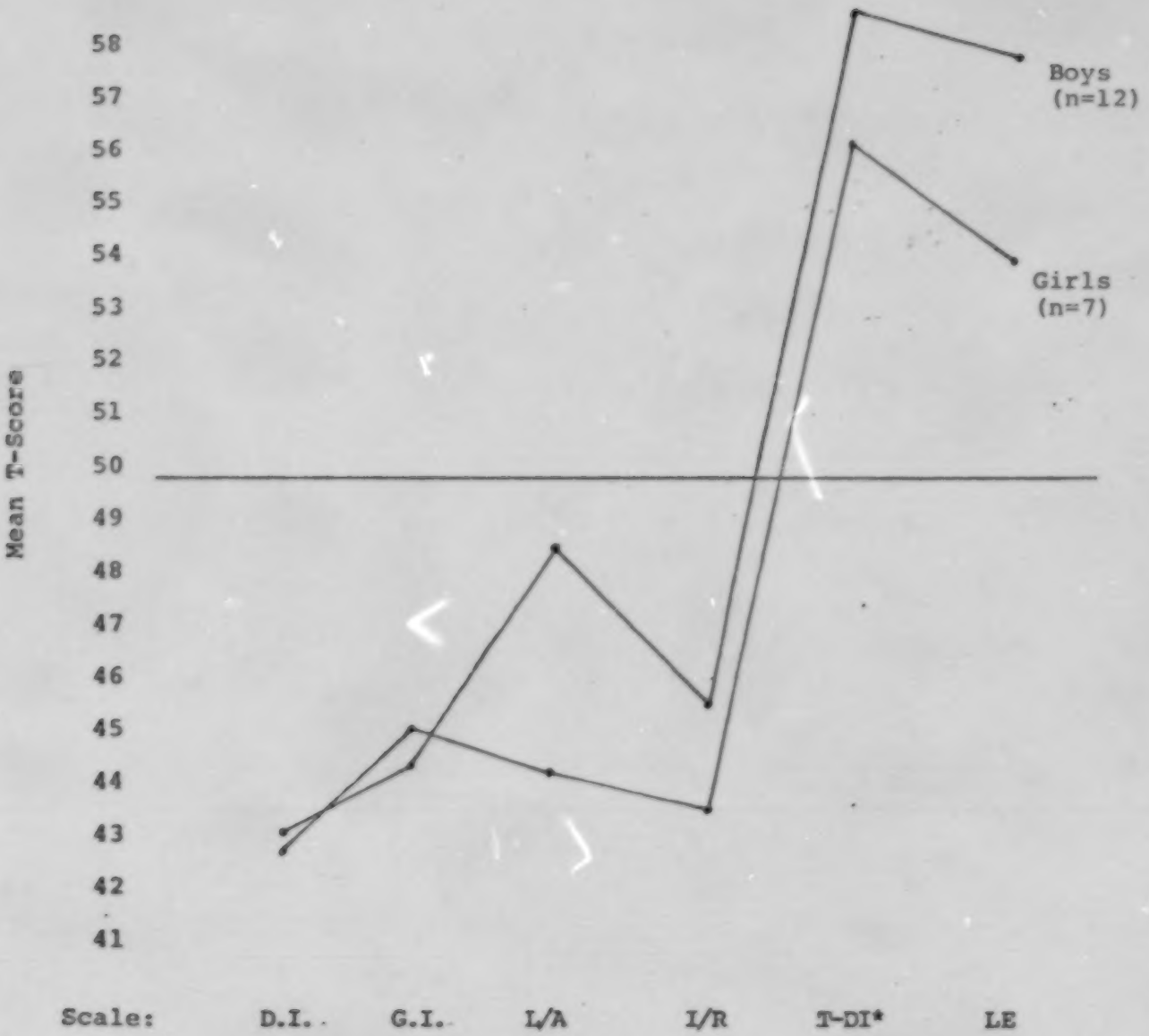
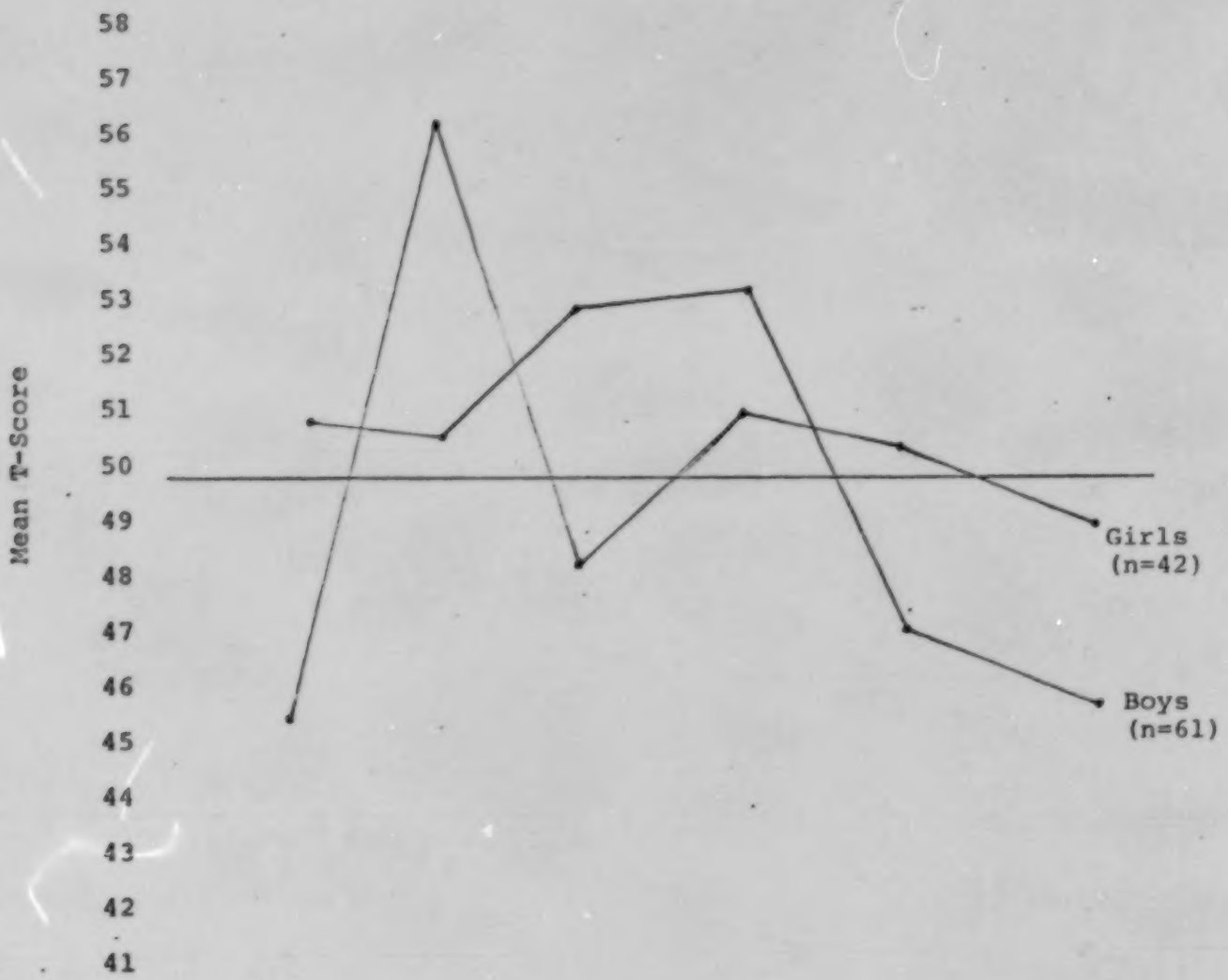


Figure 9. Results of the Decision Making Scale, Spring 1975, Area IV, Grade 9, By Sex, Anne Arundel County, Total n=103



were high in Group Integration and low in Division Integrity. Boys were low in Logical Entropy.

Summary

The tenth, eleventh, and twelfth grade results from Area III not considered, the following summary statement can be made:

1. The graphic patterns were somewhat similar across grades and areas.

2. Sex differences regularly occurred on:

   A. Decision Integrity-boys higher than girls;
   B. Group Integration-girls higher than boys;
   C. Leadership/Assertiveness-boys higher than girls; and
   D. Logical Entropy-girls higher than boys.

3. The most pronounced and regular deviations from the expected average occurred with the girls on Decision Integrity (low) and Group Integration (high); and with boys in Logical Entropy (low).

All levels of the SOS were given to the appropriate population of students in Anne Arundel County during the spring of 1975. The Primary and Intermediate levels were administered to the appropriate grade during the fall of 1974, one a pretest basis. Table illustrates the number of students administered the SOS, together with administration period.

Table 13. Number of Students Responding to the Self Observation Scales, Fall 1974 and/or Spring 1975, By Grade, Anne Arundel County Career Education Project

Grade Level	Time of Testing	
	Fall 1974	Spring 1975
3	346	522
6	355	510
9		412
10		13
11		165

The Fall. 1974 administration results for the third and sixth grades are illustrated in Tables 14 and 15 (Appendix), respectively. Area I did not participate in the Fall 1974 administration of the Self Observation Scales. The results of the administration will be discussed by area.

Area II

The third graders were about average (close to a mean score of 50) on all five scales, with the exception of the boys, who were somewhat low on Social Maturity and lower on School Affiliation. The girls were generally higher than boys on all scales (with the exception of Self Security), especially in School Affiliation.

The sixth graders were also about average on all eight scales of the intermediate test level, again with the exception of the boys, who were somewhat low on both Achievement Motivation and Social Confidence. Girls were generally higher than boys on all but three scales; (1) Social Maturity; (2) Teacher Affiliation; and (3) Peer Affiliation.

Graphic illustrations of the pretest results are provided in Figures 10 and 11.

Area III

The third graders were about average (as a group) on Self Acceptance, School Affiliation, and Achievement Motivation. They were somewhat high on both Social Maturity and Self Security. Boys were somewhat low on School Affiliation. Girls were generally higher than boys on all scales except Self Security, on which boys and girls were about equal.

The sixth graders, as a group, were about average on all eight of the intermediate scales. Boys were somewhat low on Achievement Motivation, as compared to the girls or the normative mean score. No consistent sex pattern emerged so far as one being generally higher or lower than the other across scales.

Figures 12 and 13 present graphic illustrations of the results.

Area IV

The third graders were, again, about average as a group on all five scales of the primary level instrument. Consistent with the other two areas discussed above, boys again were somewhat low on School Affiliation. Girls were also somewhat higher than boys on Social Maturity, but a consistent sex pattern was not present.

The sixth graders were close to the national average on all eight scales of the intermediate level. Girls were somewhat higher on Achievement Motivation, but consistent sex differences across scales did not occur.

The Area IV results are graphically depicted in Figures 14 and 15.

Fall Administration Summary

Taken as a group, both the third and sixth graders in Areas II, III, and IV of Anne Arundel County were about average as compared to the norming sample means for the two levels of the Self Observation Scales. Third grade boys were generally lower on School Affiliation.

Self Observation Scales Spring Administration

All four levels of the Self Observation Scales were administered to the appropriate project students in the spring of 1975. Returns from all four areas of the County were available for the third, sixth, and ninth grades. None were available for eleventh grade students in Area IV. The results will be presented by Area.

Figure 10. Self Observation Scales, Primary Level Results, Fall 1974, Grade 3, By Sex, Area II, Anne Arundel County

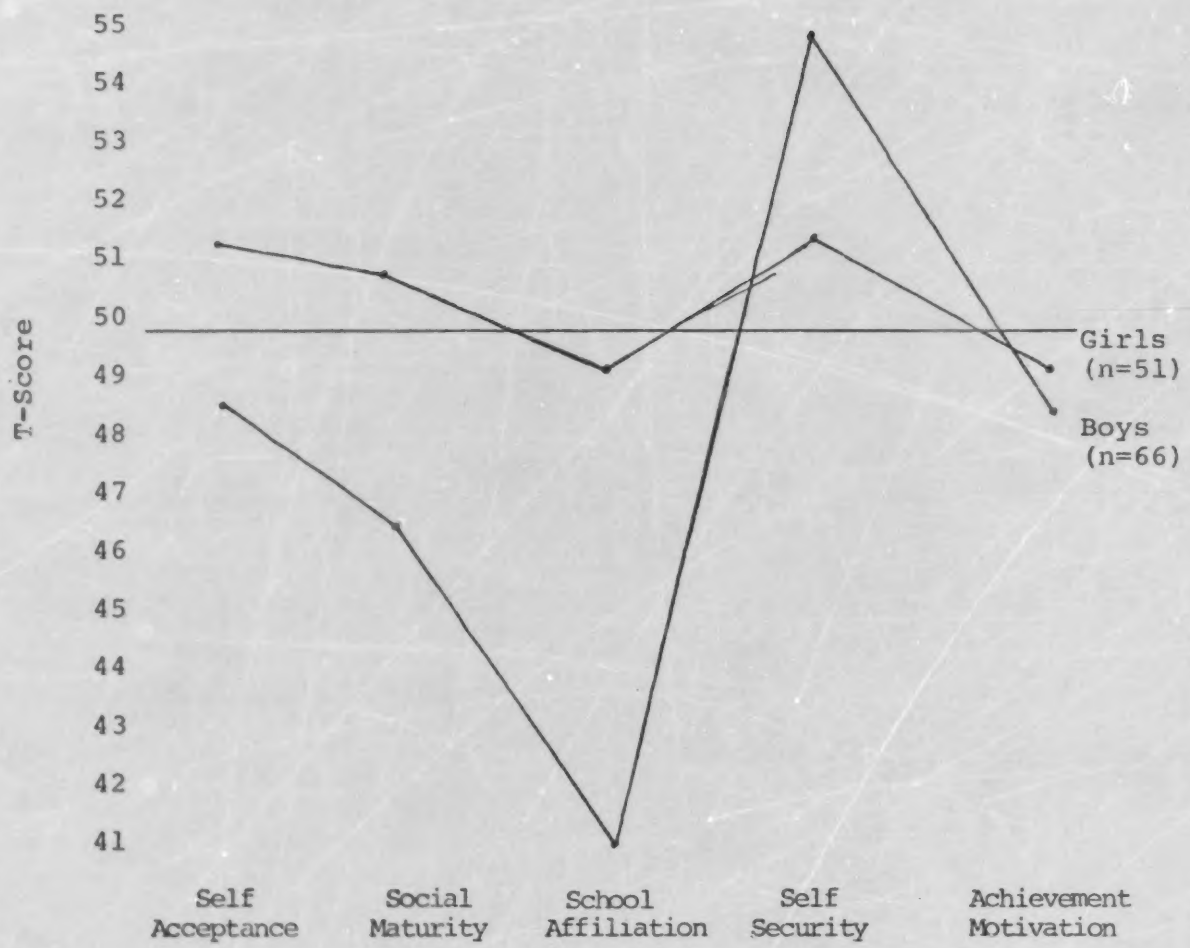


Figure 11. Self Observation Scales, Intermediate Level Results, Fall 1974, Grade 6, By Sex, Area II, Anne Arundel County

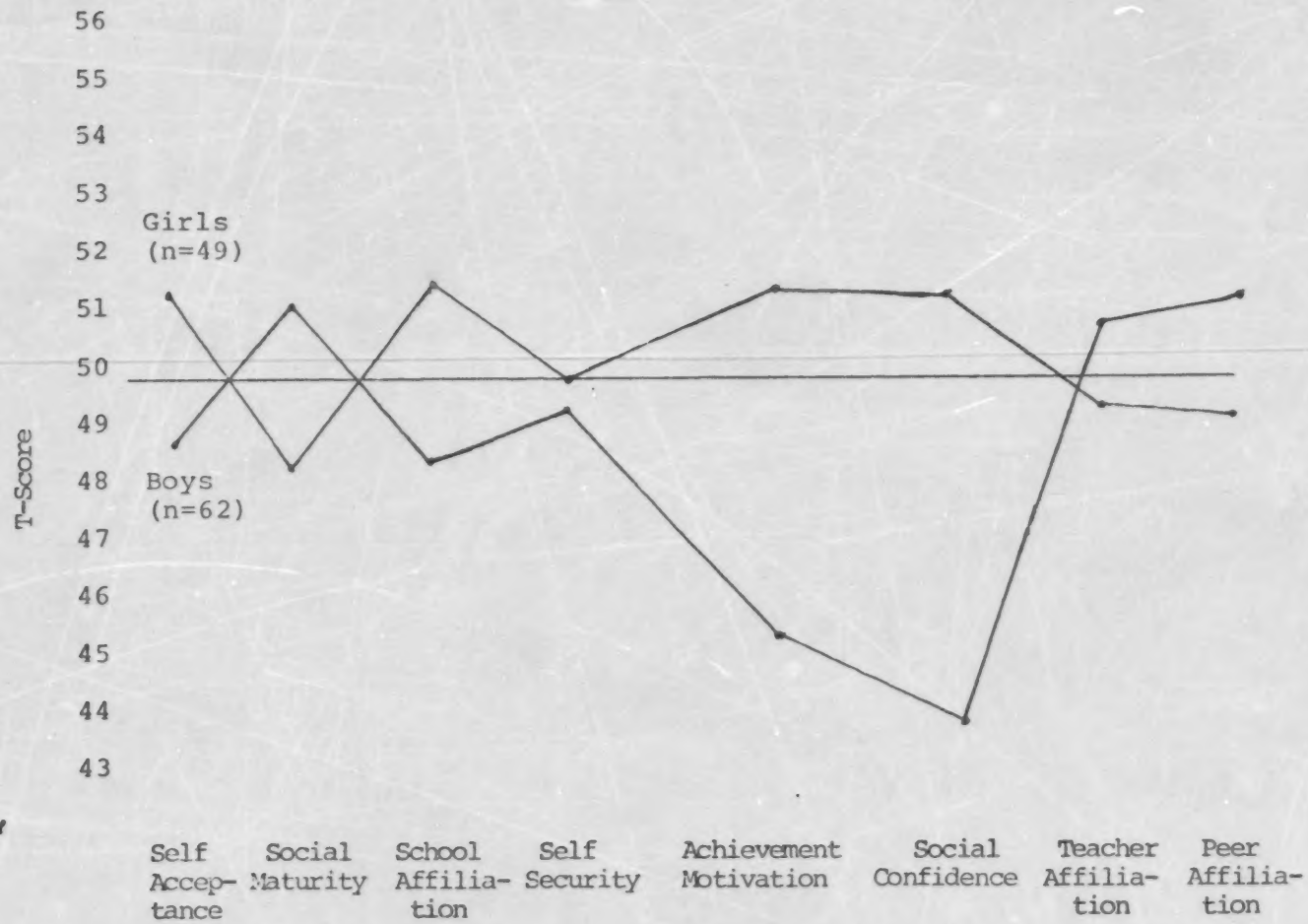


Figure 12. Self Observation Scales, Primary Level Results, Fall 1974, Grade 3, By Sex, Area III, Anne Arundel County

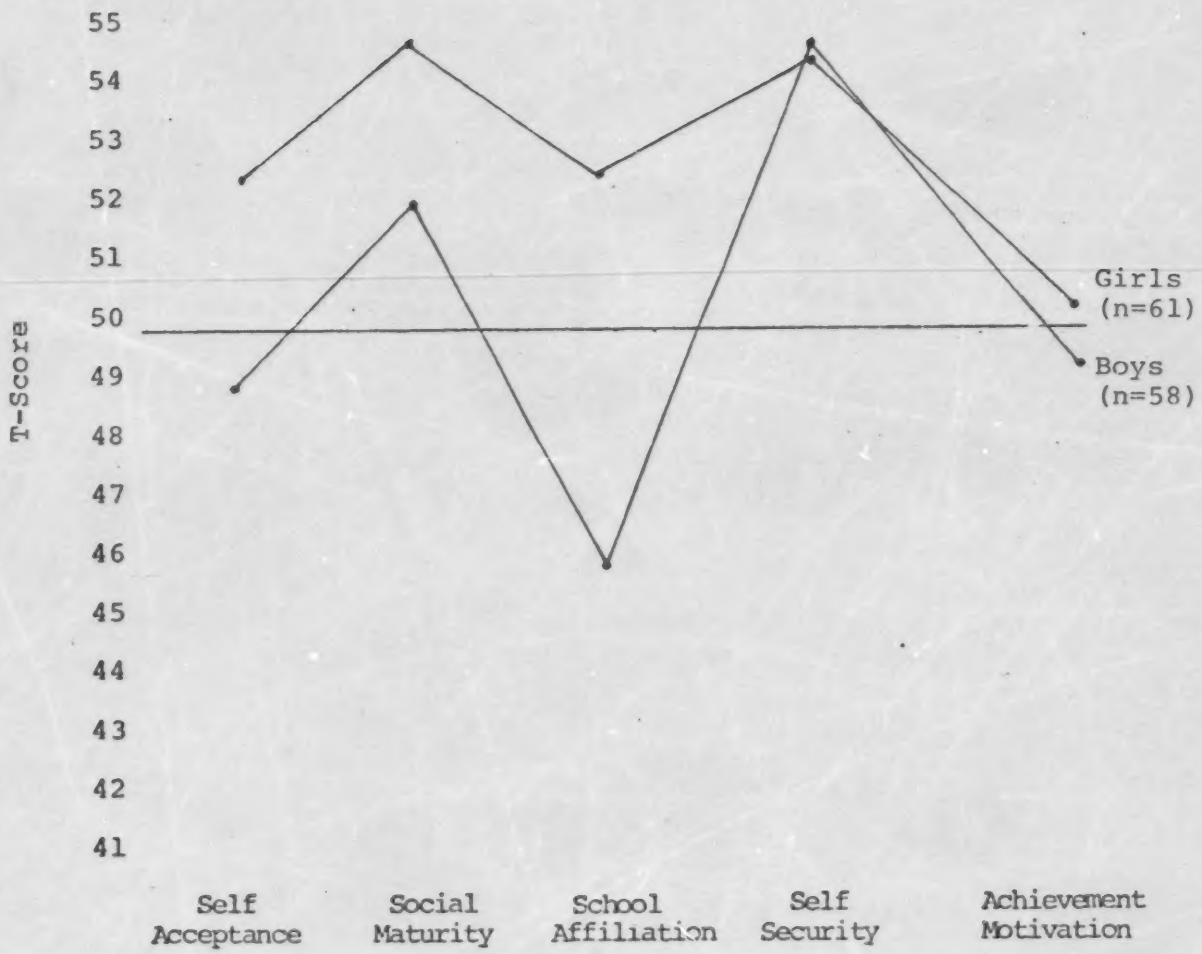


Figure 13. Self Observation Scales, Primary Level Results, Fall 1974, Grade 3, By Sex, Area IV, Anne Arundel County

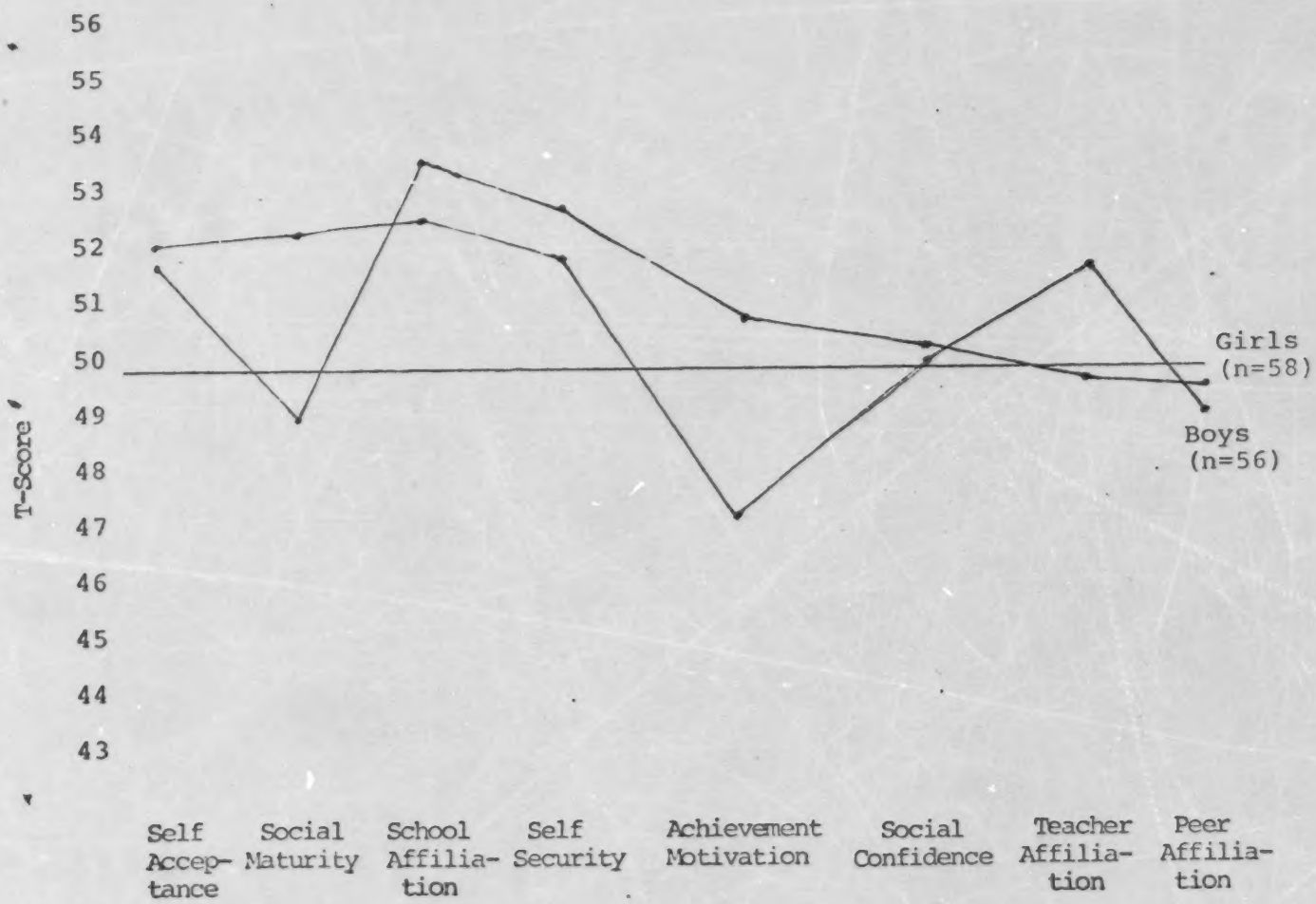


Figure 14. Self Observation Scales, Primary Level Results, Fall 1974, Grade 3, By Sex, Area IV, Anne Arundel County

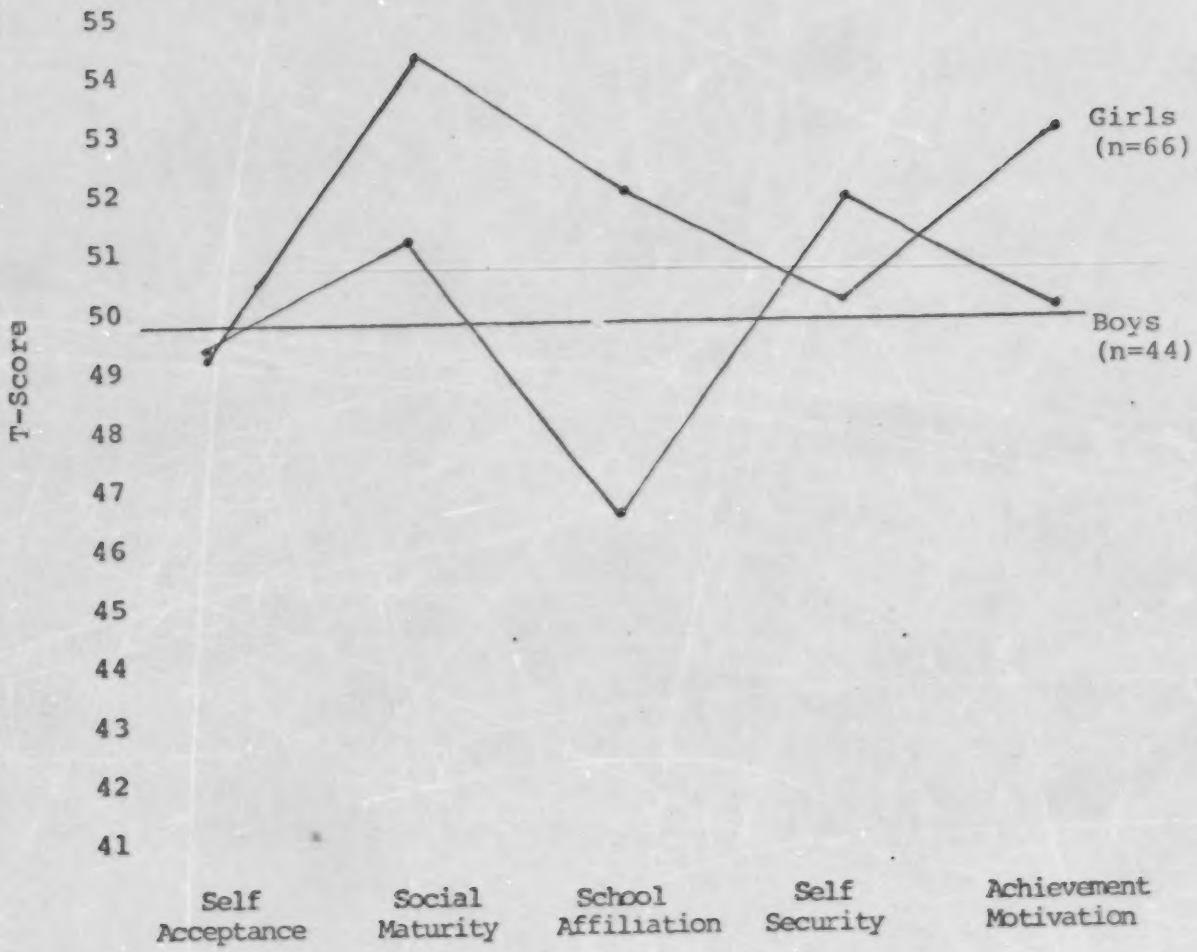
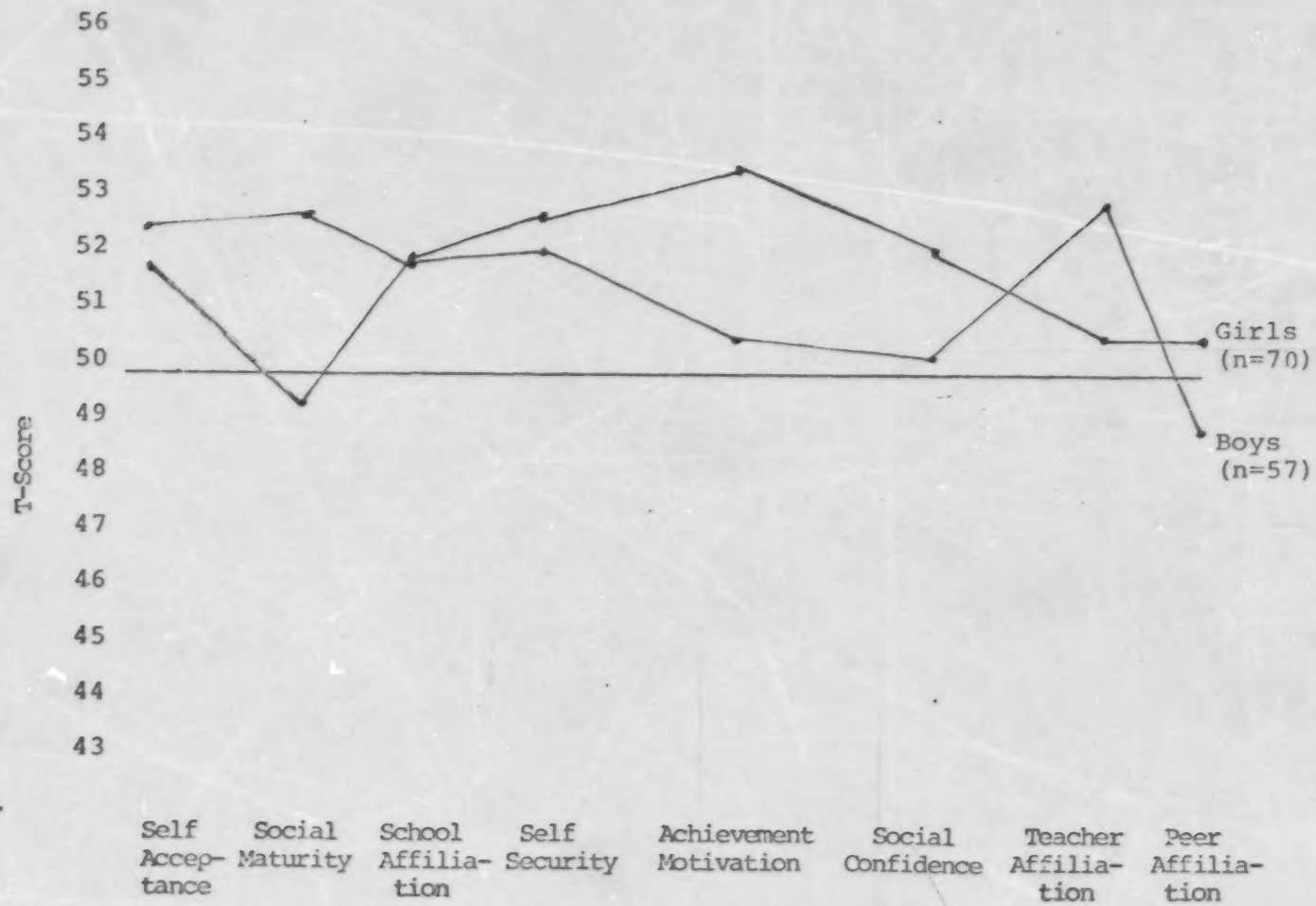


Figure 15. Self Observation Scales, Intermediate Level Results, Fall 1974, Grade 6, By Sex, Area IV, Anne Arundel County



Area I

Table 16 (Appendix) illustrates the results for the third grade students in Area I. Both boys and girls were about average on Self Security, somewhat lower on Social Maturity (boys only), and generally low on Self Acceptance and School Affiliation. Girls were consistently higher than boys on all four scales presented. The results are geographically illustrated in Figure 16.

The results for the sixth grade students are shown in Table 17 (Appendix). As a group, they were about average on Self Acceptance, Achievement Motivation, and Social Confidence; somewhat higher on Peer Affiliation, Social Maturity and School and Teacher Affiliation; and high on Self Security. Girls were generally higher than boys on five of the eight scales; considerably so on Achievement Motivation, Social Confidence, and School Affiliation. The sex difference was not, however, consistent across scales. Figure 17 is a graphic depiction of the results.

Figure 16. Self Observation Scales, Primary Level Results, Spring 1975, Grade 3, By Sex, Area I, Anne Arundel County

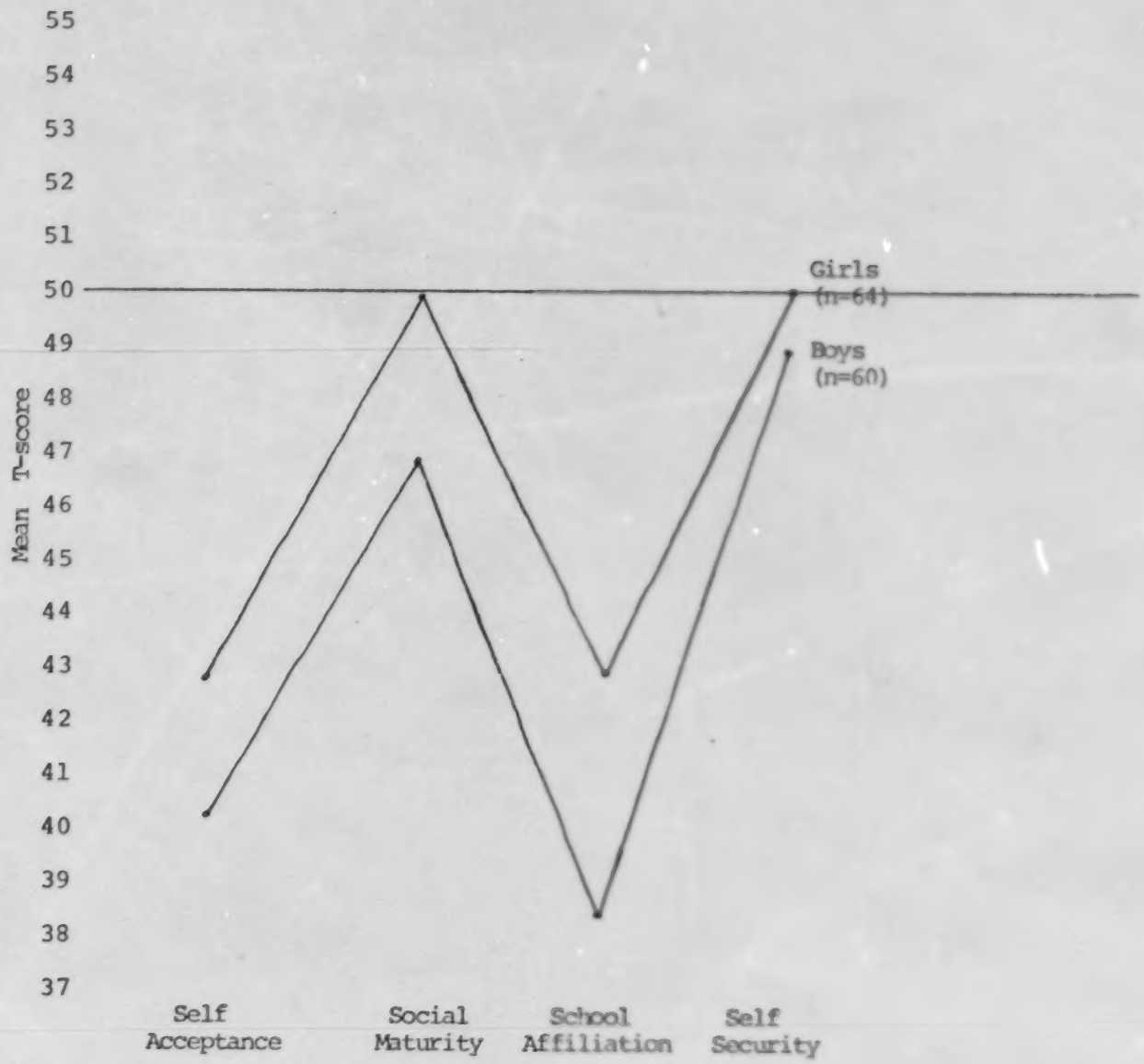


Figure 17. Self Observation Scales, Intermediate Level Results, Grade 6, Spring 1975, By Sex, Area I, Anne Arundel County

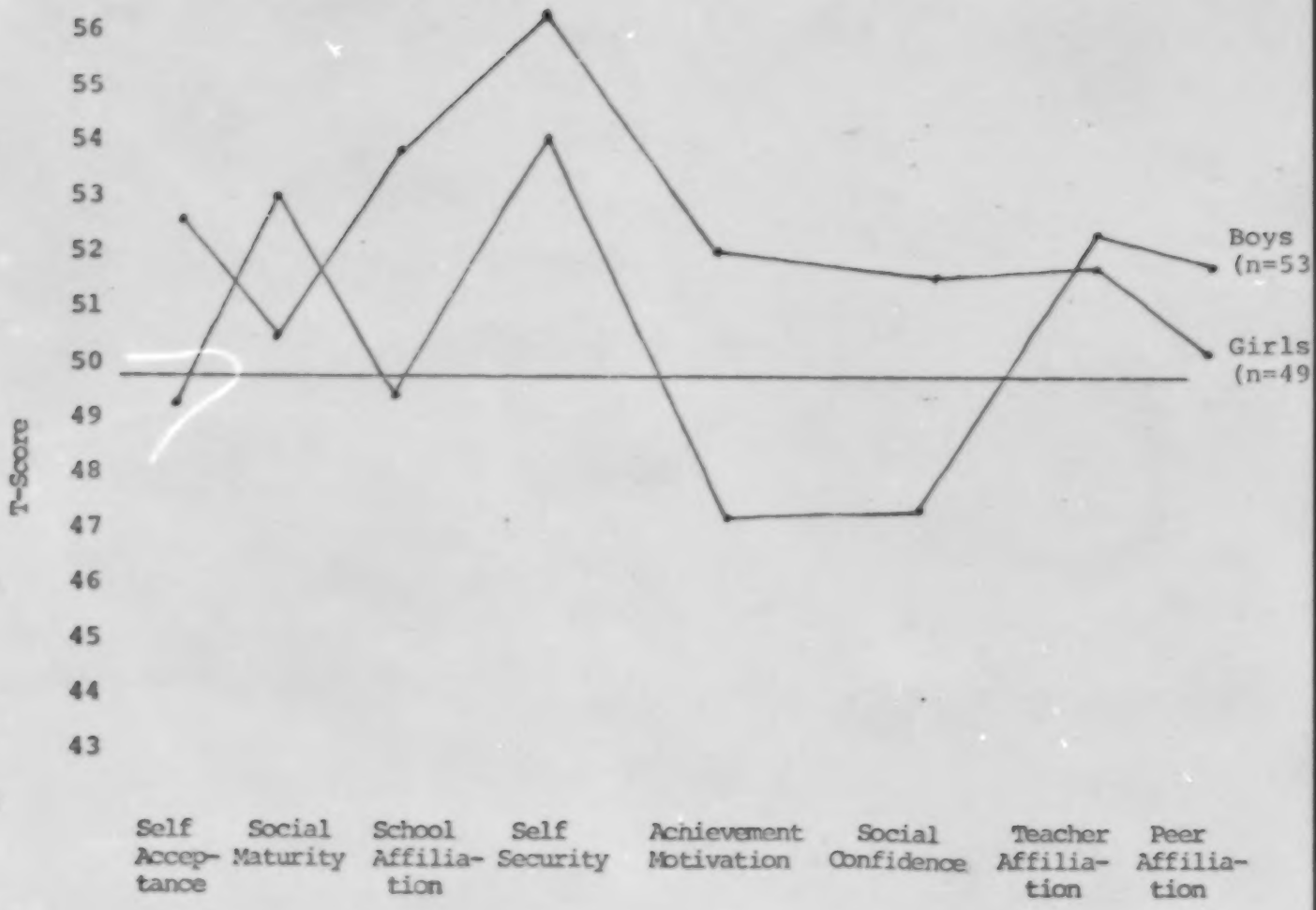


Table 18 (Appendix) is an illustration of the results for the ninth graders in Area I. Without reference to sex differences, they were about average on Self Acceptance, Self Security, Social Confidence, and Teacher Affiliation; somewhat low on Self Assertion, School Affiliation, Peer Affiliation, and Family Affiliation; and higher on Social Maturity. Girls were considerably higher than boys on Self Security, and Social Maturity, whereas boys were noticeably higher on Social Confidence. The sex pattern is not clear-cut, even though girls were generally higher than boys on six of the nine subscales. Figure 18 provides a graphic illustration of the results.

The results for the eleventh graders are illustrated in Table 19 (Appendix). A graphic depiction is provided by Figure 19. Taken as a group, they were about average on all scales except Social Maturity, on which they were high. Some sex differences are apparent, especially with Self Acceptance (boys higher than girls) and Self Security (girls higher than boys), but not consistent enough for a general conclusion.

Area II

The third graders, as illustrated in both Table 20 (Appendix) and Figure 20 were about average as a group on Social Maturity and Self Security; and low on both Self Acceptance and School Affiliation. Girls wer. somewhat higher than boys on Social Maturity and School Affiliation; and lower than boys on Self Security.

Figure 18. Self Observation Scales, Junior High Level Results, Spring 1975, Grade 9, By Sex, Area I, Anne Arundel County

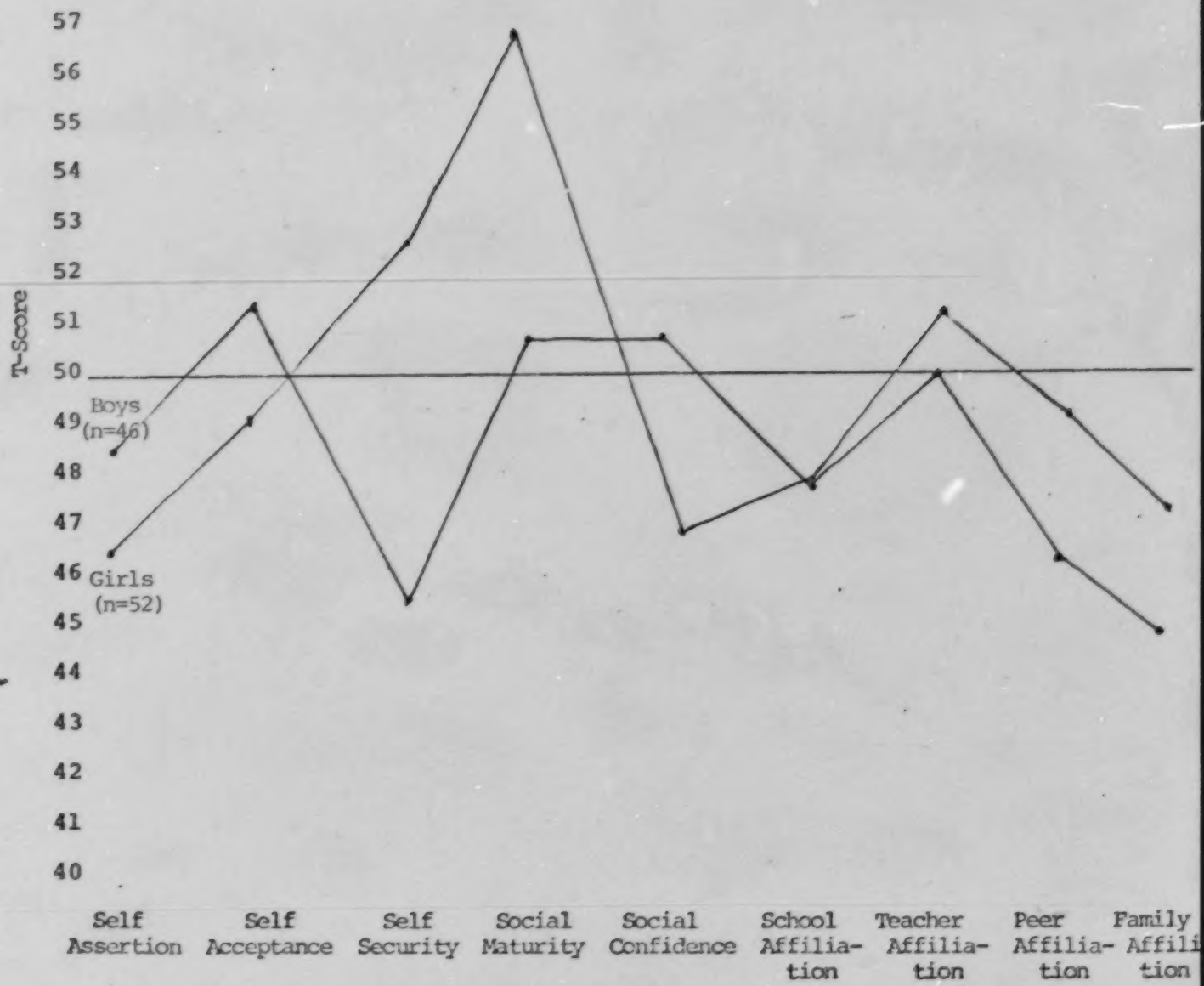


Figure 19. Self Observation Scales, Senior High Results, Spring 1975, Grade 11, By Sex, Area I, Anne Arundel County

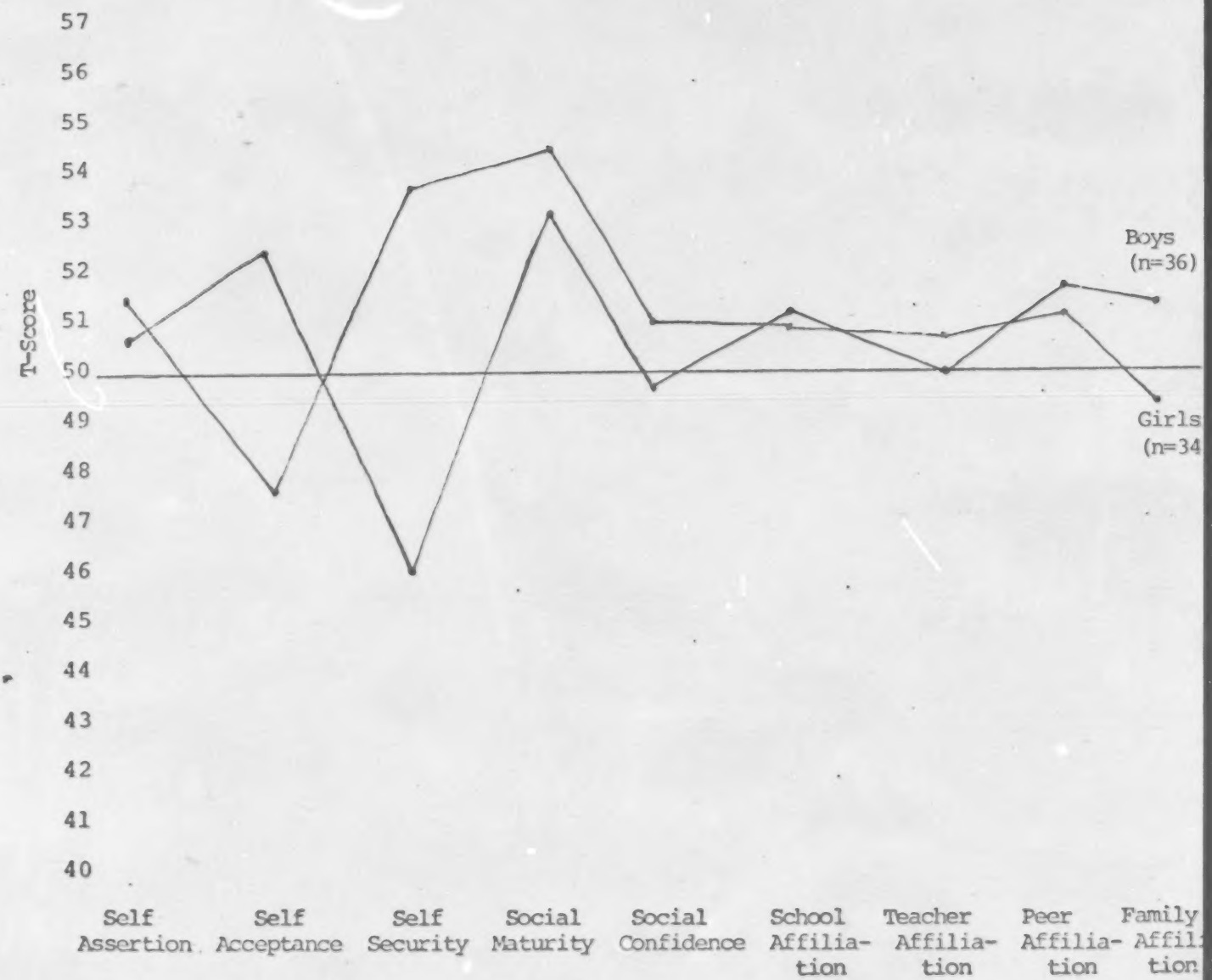
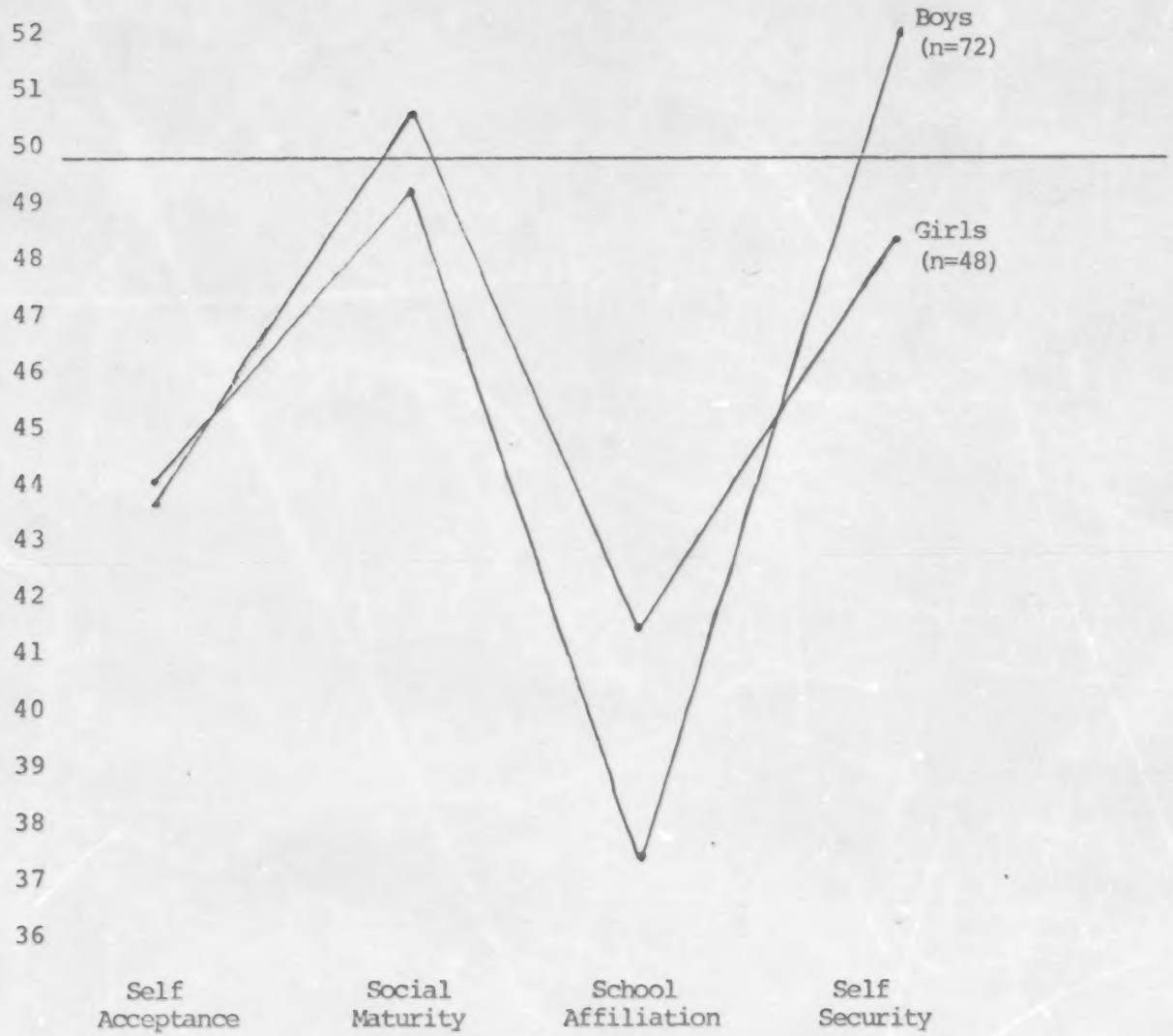


Figure 20. Self Observation Scales, Primary Level Results, Spring 1975, Grade 3, By Sex, Area II, Anne Arundel County



The sixth graders were somewhat higher than average on five of the eight scales provided in the intermediate form; about average as a group on Social Confidence; and slightly lower than average on Peer Affiliation and Achievement Motivation. Table 21 (Appendix) and Figure 21 illustrate the results. Girls were generally higher than boys, with Social Maturity and Teacher Affiliation the exceptions to the general pattern.

The results for the ninth grade are illustrated in Table 22 (Appendix) and geographically in Figure 22. Both boys and girls were somewhat low on Self Assertion and School Affiliation; and low on Peer and Family Affiliation. The most dramatic sex difference occurred on Self Security, with the boys scoring low. Boys were slightly or more below the national average on all but one scale - Self Acceptance. Girls exceeded the average on four of the nine scales.

Table 23 (Appendix) provides an illustration of the results from the eleventh grade students in Area II. Taken as a group, the students were about average on Self Acceptance, Social Confidence, and Teacher Affiliation. The graphic illustration of the results afforded by Figure 23 depicts a consistent sex pattern, however, with girls higher than boys on all but one scale (Self Acceptance). The boys were higher than average on only two scales - Self Acceptance and Social Maturity.

Area III

The results of the administration of the Primary form of the Self Observation Scales are illustrated in Table 24 (Appendix) and Figure 24. Girls were consistently higher than boys as well as being somewhat higher than the national average on all four scales.

Figure 21. Self Observation Scales, Intermediate Level Results, Spring 1975, Grade 6, By Sex, Area II, Anne Arundel County

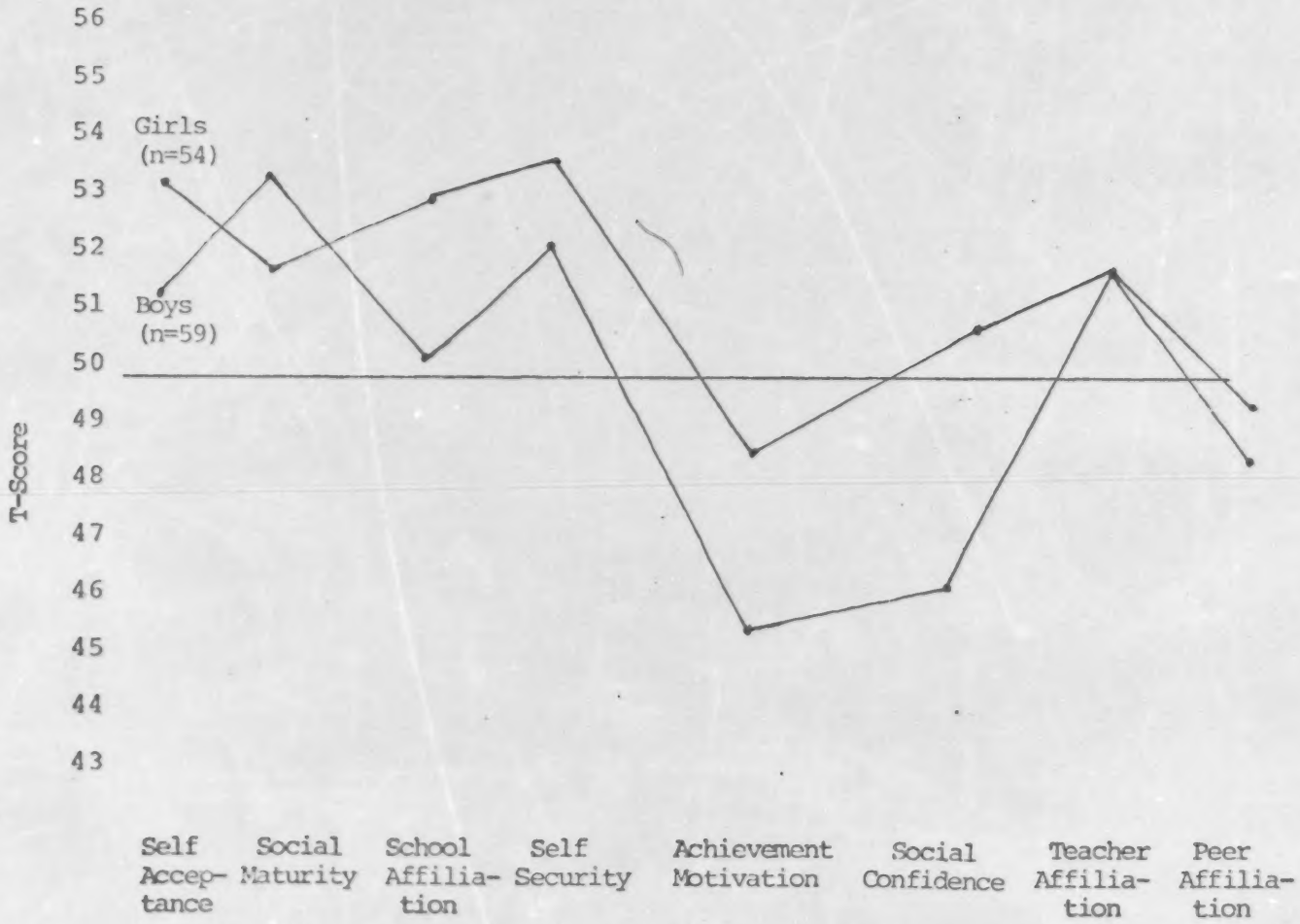


Figure 22. Self Observation Scales, Junior High Results, Spring 1975, Grade 9, By Sex, Area II, Anne Arundel County

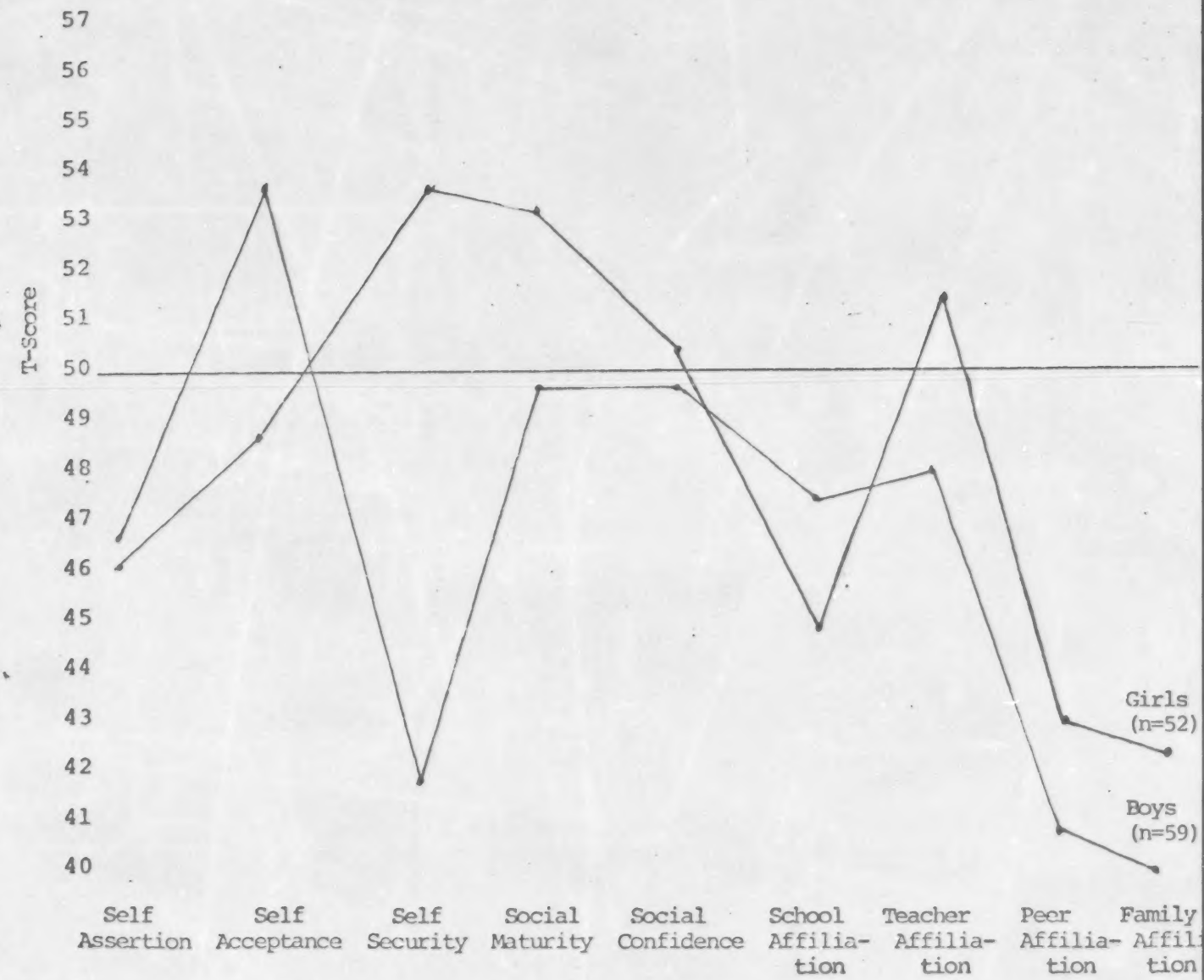


Figure 23. Self Observation Scales, Senior High Results, Spring 1975, Grade 11, By Sex, Area II, Anne Arundel County

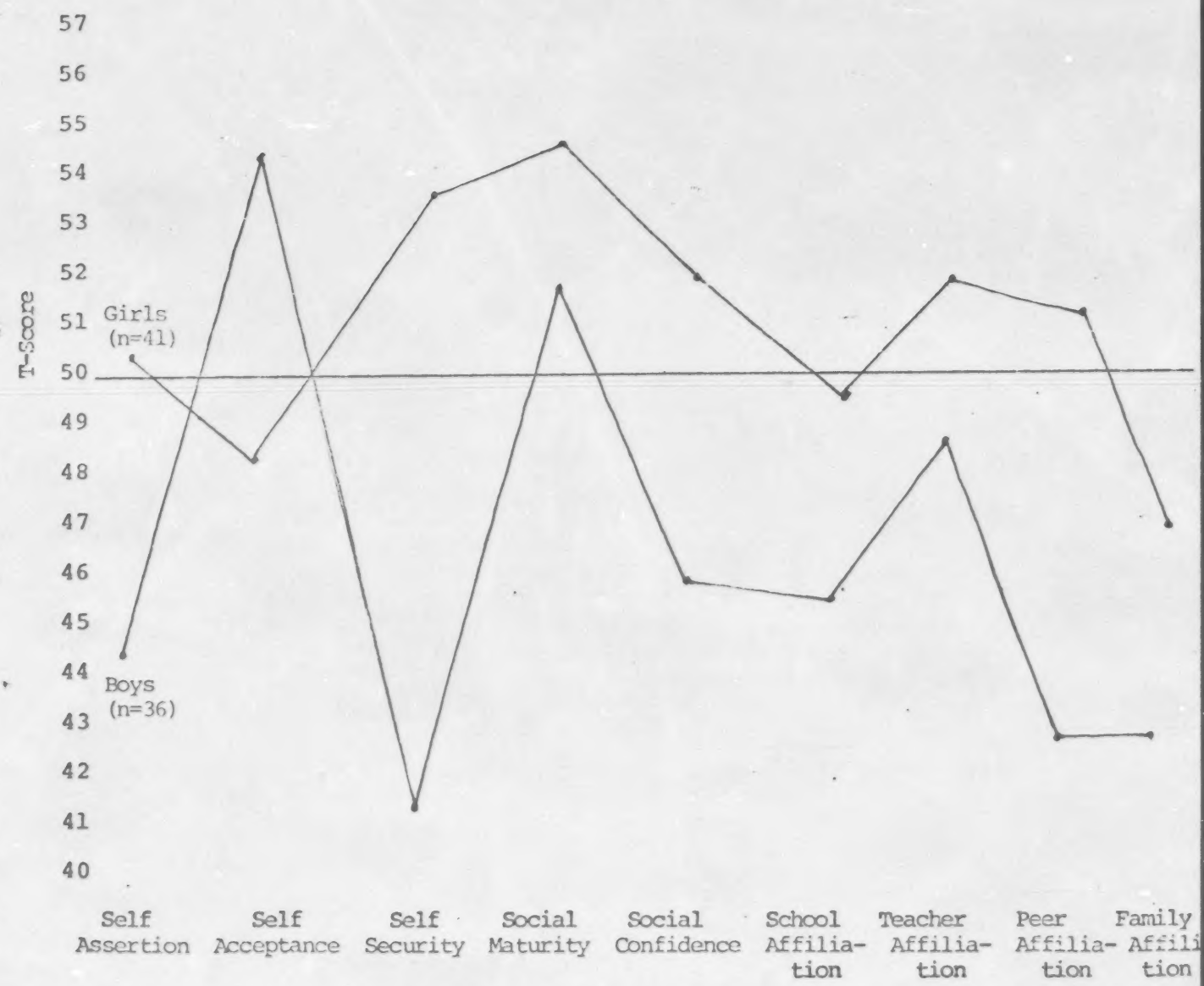
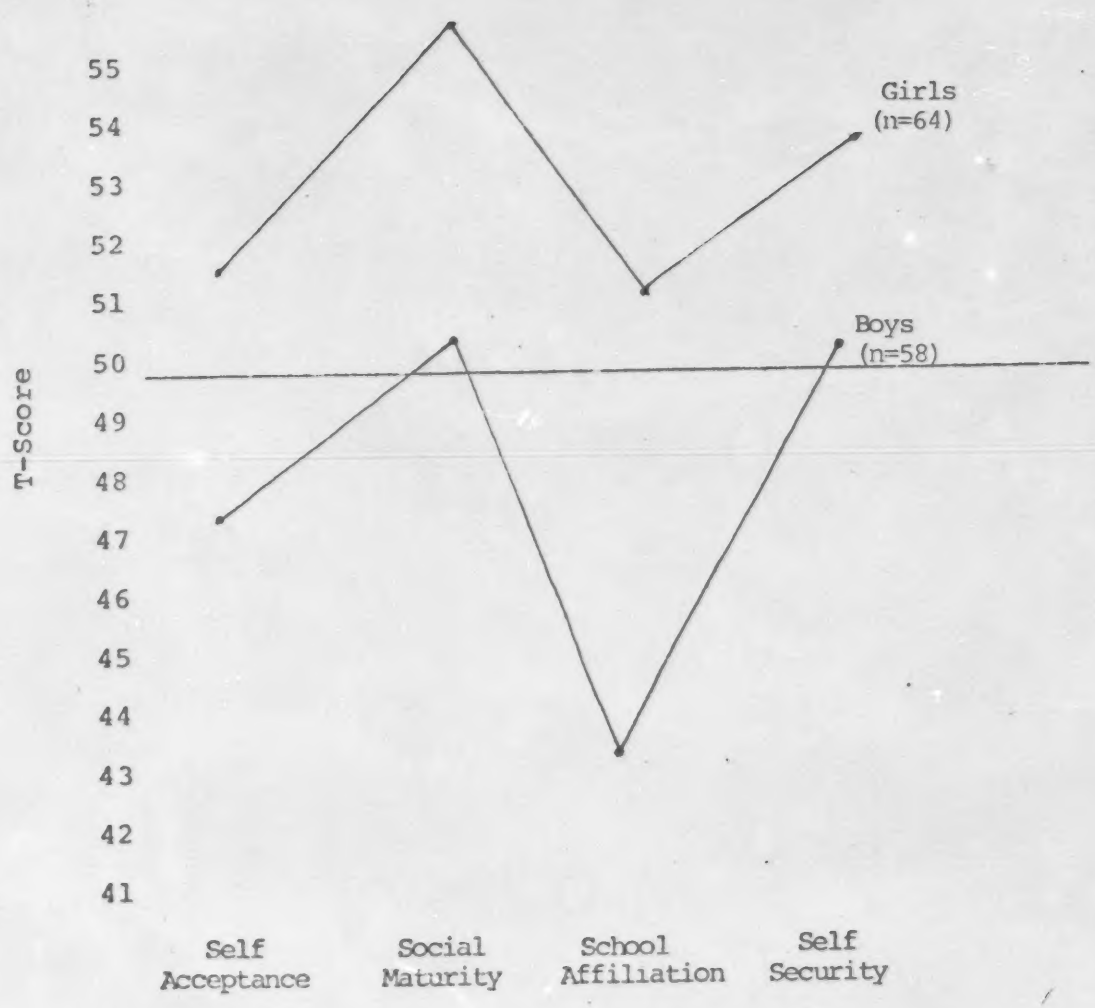


Figure 24. Self Observation Scales, Primary Level Results, Spring 1975, Grade 3, By Sex, Area III, Anne Arundel County



The boys were low on both School Affiliation and, to a lesser extent, Self Acceptance.

A sex pattern similar to the third grade results is illustrated for the sixth grade in Table 25 (Appendix) and Figure 25. Girls were higher than boys on all but one of the eight scales provided. The most noticeable differences are those in Self Acceptance, Achievement Motivation, and Social Confidence. Girls were above the national average on all eight scales, whereas boys were higher on four. Boys were somewhat low on both Achievement Motivation and Social Confidence.

Table 26 (Appendix) and Figure 26 depict the ninth grade results. Again, sex differences are readily apparent, with the girls higher than boys on all but one of the nine subscales (Self Acceptance). For reference to the national average, it may be said that boys were low on Self Security, while girls were high on Self Security, Social Maturity, Teacher and Peer Affiliation.

Both tenth and eleventh graders were administered the senior level of the Self Observation Scales in Area III of Anne Arundel County. The number of students tested at each grade level was rather small in this case (12 and 17, respectively, identifiable by sex), and the reader is cautioned that such small numbers detract from generalization. The results for the tenth grade are presented in Table 27 (Appendix) and Figure 27; the eleventh, Table 28 (Appendix) and Figure 28. A sex difference pattern was again evident in both cases, with girls higher than boys on most scales. The students were generally below the average on the scales, with boys lower than girls. Again, the small number of students represented in the tables and figures serve as a caution.

Figure 25. Self Observation Scales, Intermediate Level Results, Spring 1975, Grade 6, By Sex, Area III, Anne Arundel County

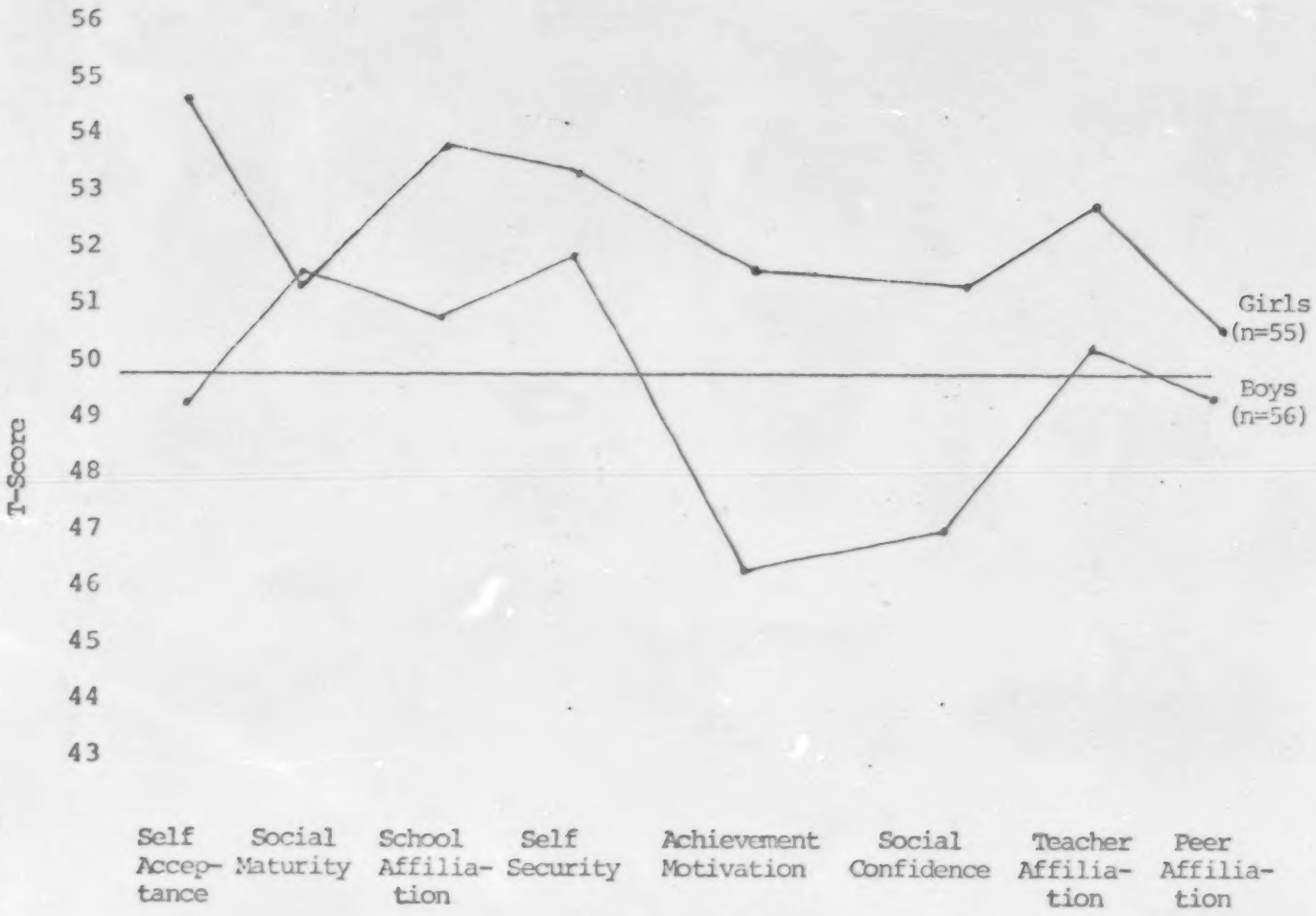


Figure 26. Self Observation Scales, Junior High Results, Spring 1975, Grade 9, By Sex, Area III, Anne Arundel County

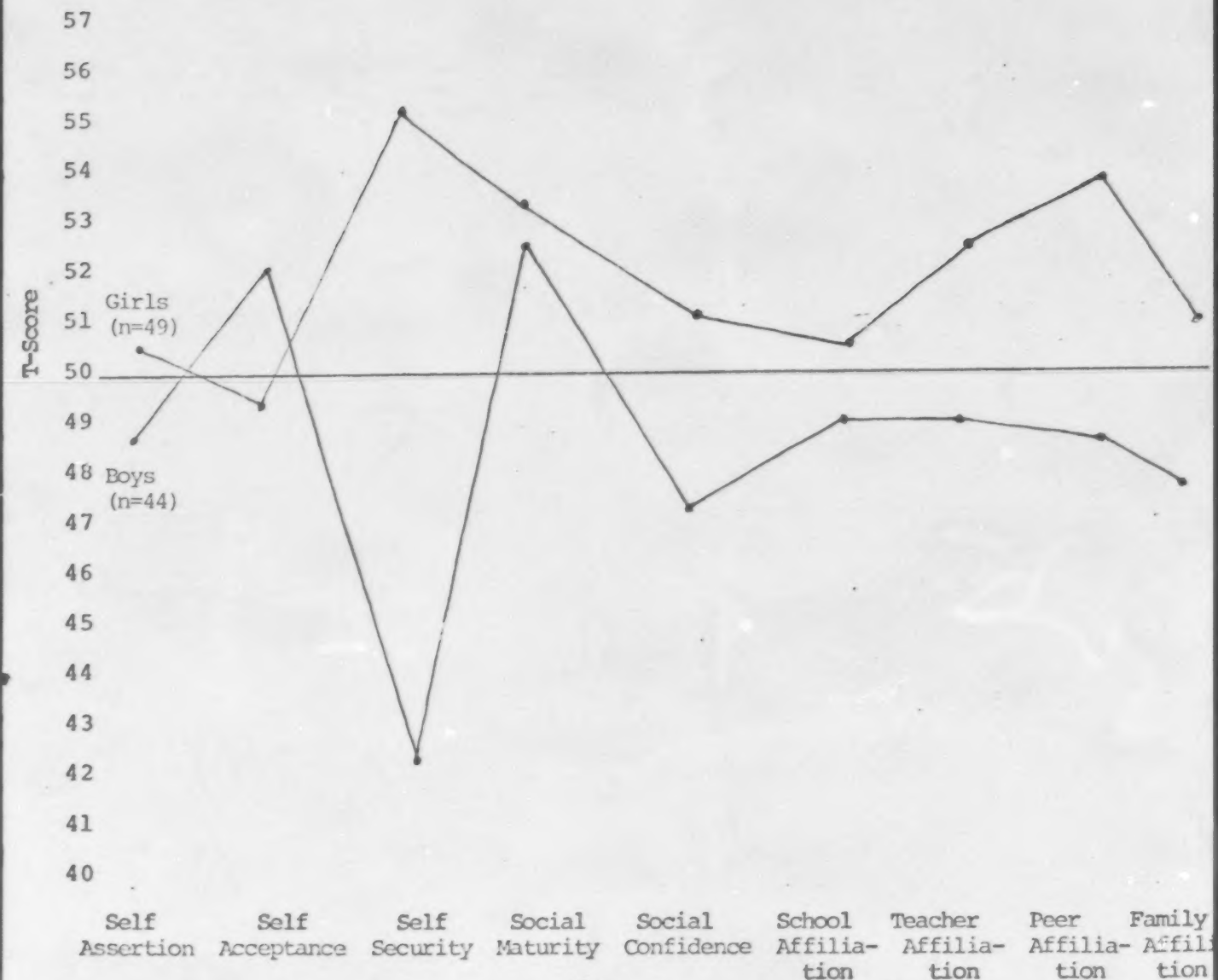


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Figure 27. Self-Observation Scales, Senior High Results, Spring 1975, Grade 10, By Sex, Area III, Anne Arundel County

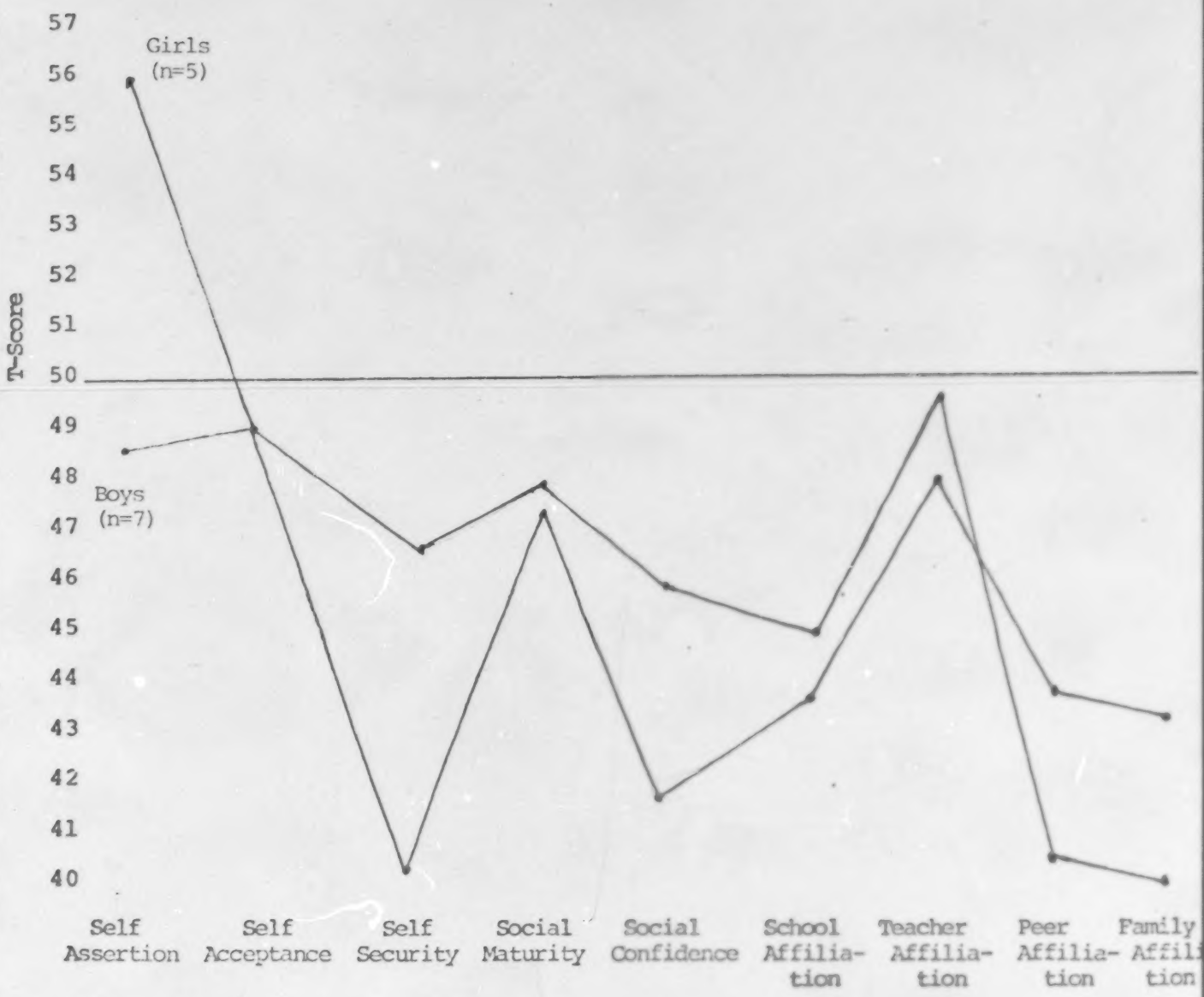
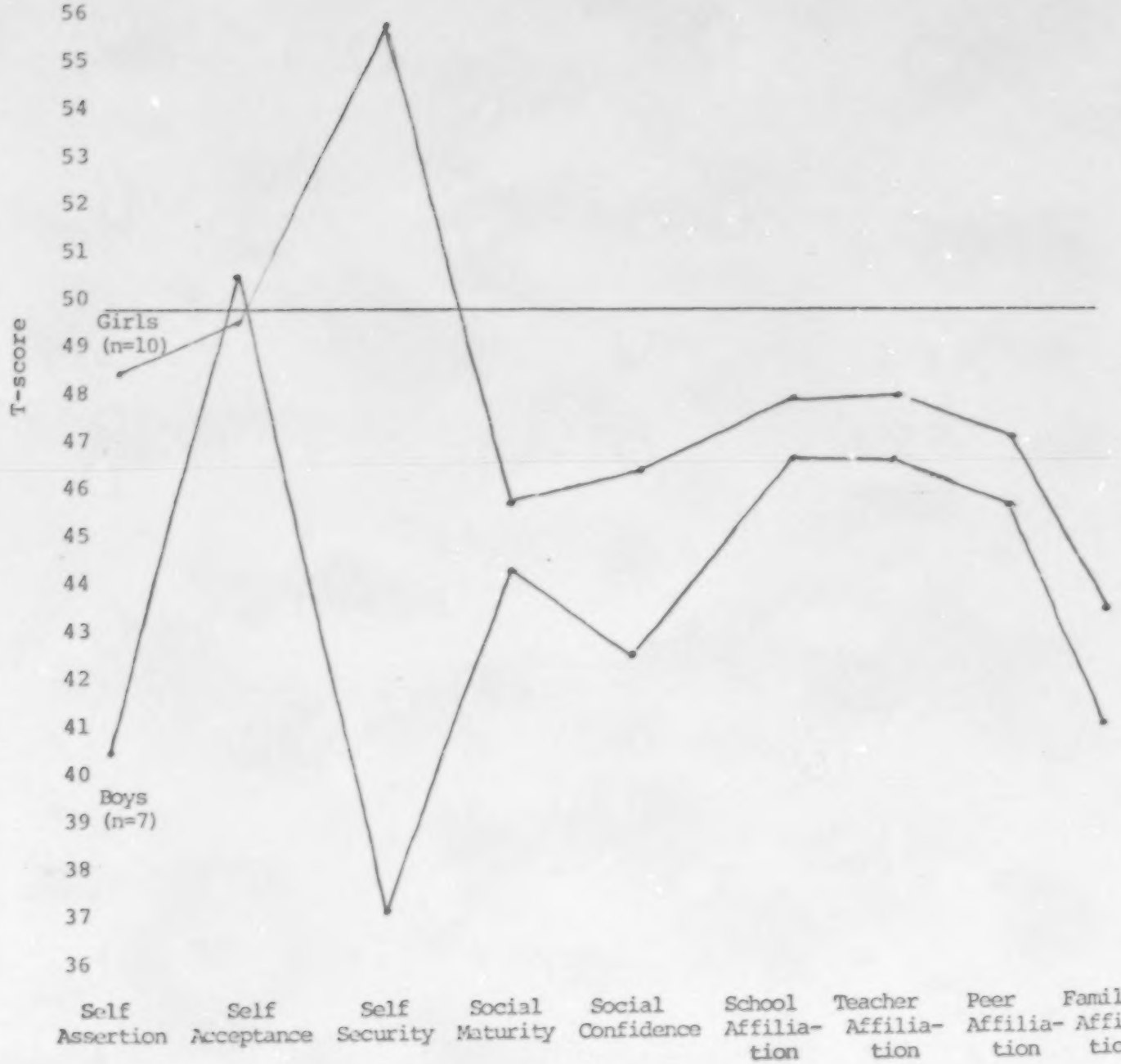


Figure 28. Self Observation Scales, Senior High Level Results, Spring 1975, Grade 11, By Sex, Area III, Anne Arundel County



Area IV

Taken as a group, the third grade students tested in Area IV were about average on Self Security and Social Maturity; and somewhat low on both Self Acceptance and School Affiliation. Girls were generally higher than boys (except on Self Security). Girls were high on Social Maturity, and somewhat low on both Self Acceptance and School Affiliation. Boys were somewhat low on Self Acceptance and low on School Affiliation. Table 29 (Appendix) and Figure 29 depict the results.

The results of the sixth grade students are illustrated in Table 30 (Appendix) and Figure 30. Both boys and girls were high on Self Acceptance, School Affiliation, Self Security, and, to a lesser extent with the girls, Teacher Affiliation. Boys were low on Achievement Motivation, girls on Social Maturity. No consistent sex pattern is evident.

Table 31 (Appendix) and Figure 31 illustrate the ninth grade results. Again, no consistent sex pattern is evident. Taken as a group, the students were about average on Self Assertion, Self Acceptance, Self Security, Social Maturity, and Teacher Affiliation. The profile indicated by Figure 31 may be interpreted as somewhat lower than the average, with certain exceptions.

Figure 29. Self Observation Scales, Primary Level Results, Spring 1975, Grade 3, By Sex, Area IV, Anne Arundel County

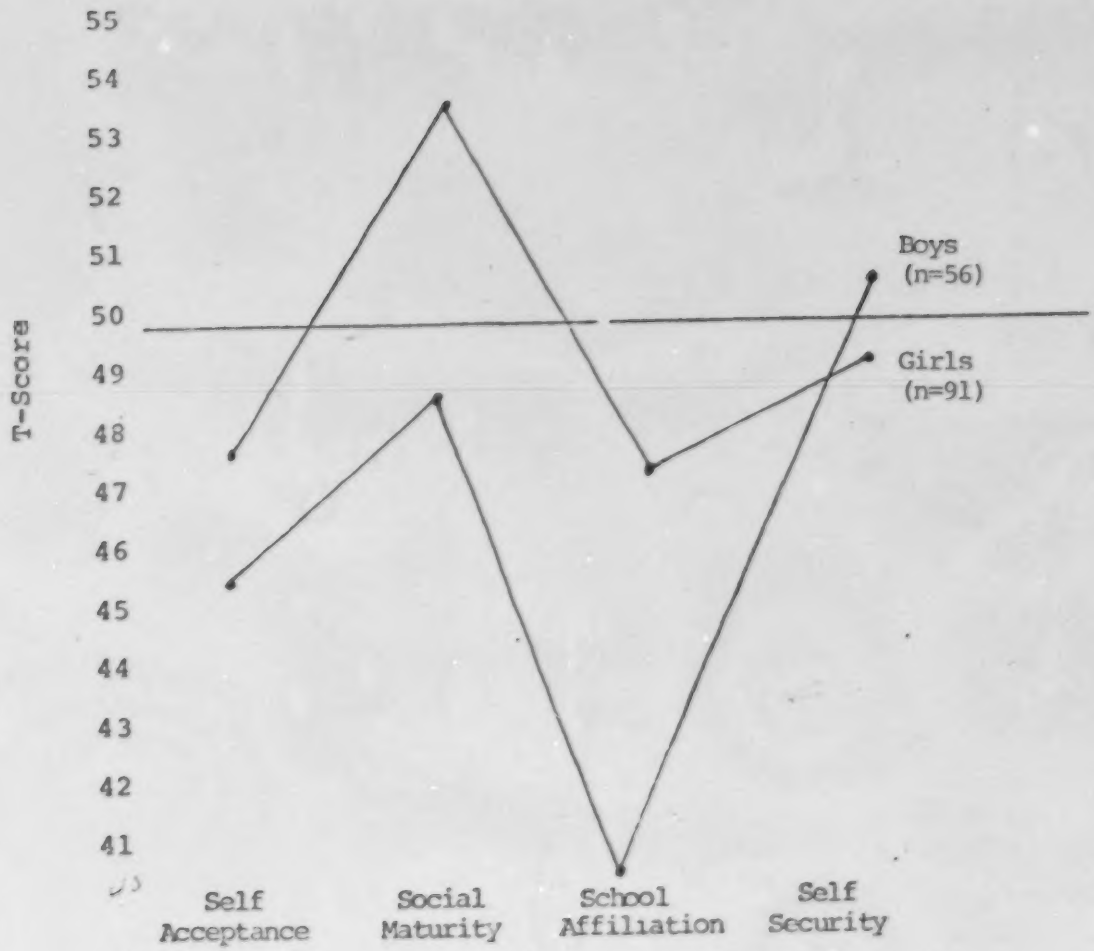


Figure 30. Self Observation Scales, Intermediate Level Results, Spring 1975, Grade 6, By Sex, Area IV, Anne Arundel County

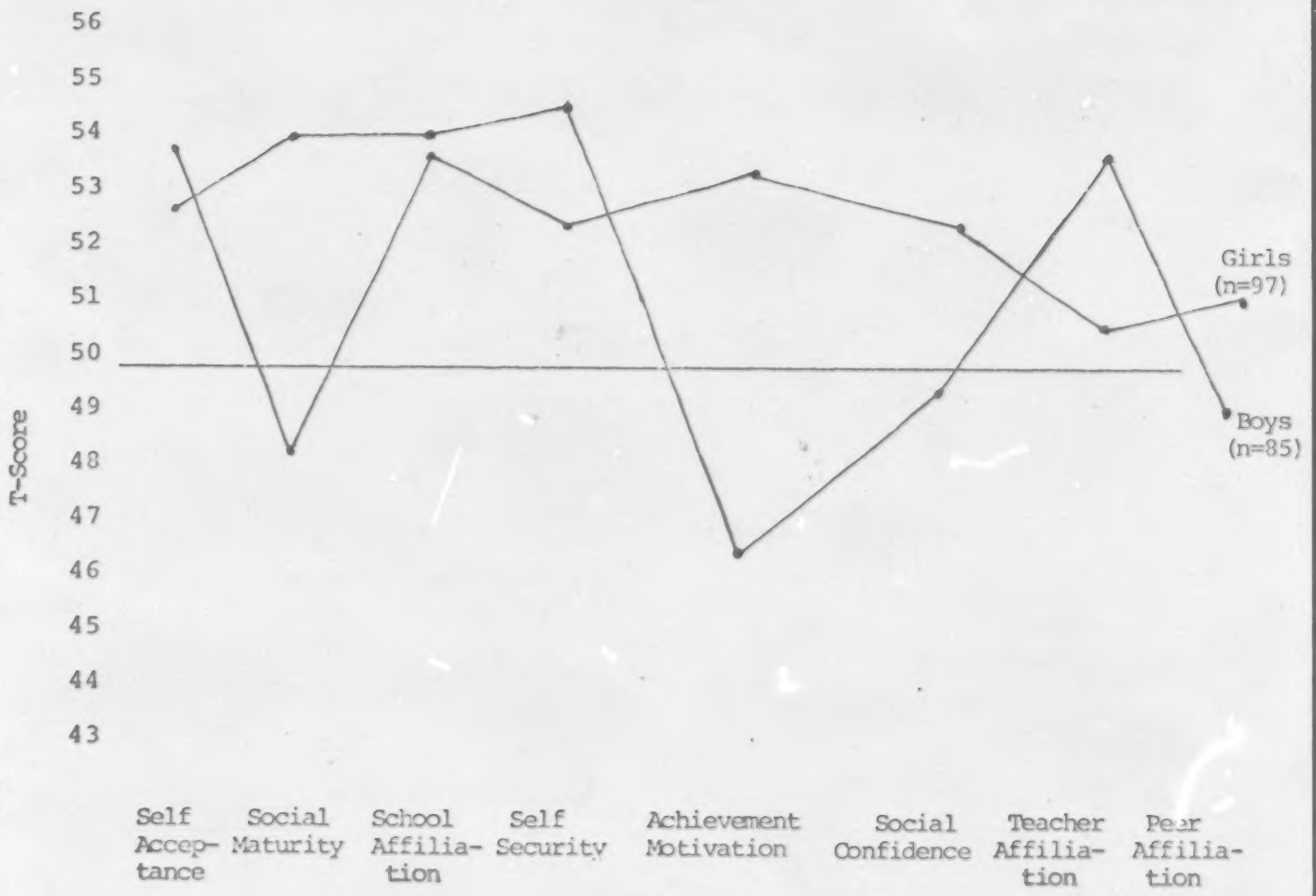
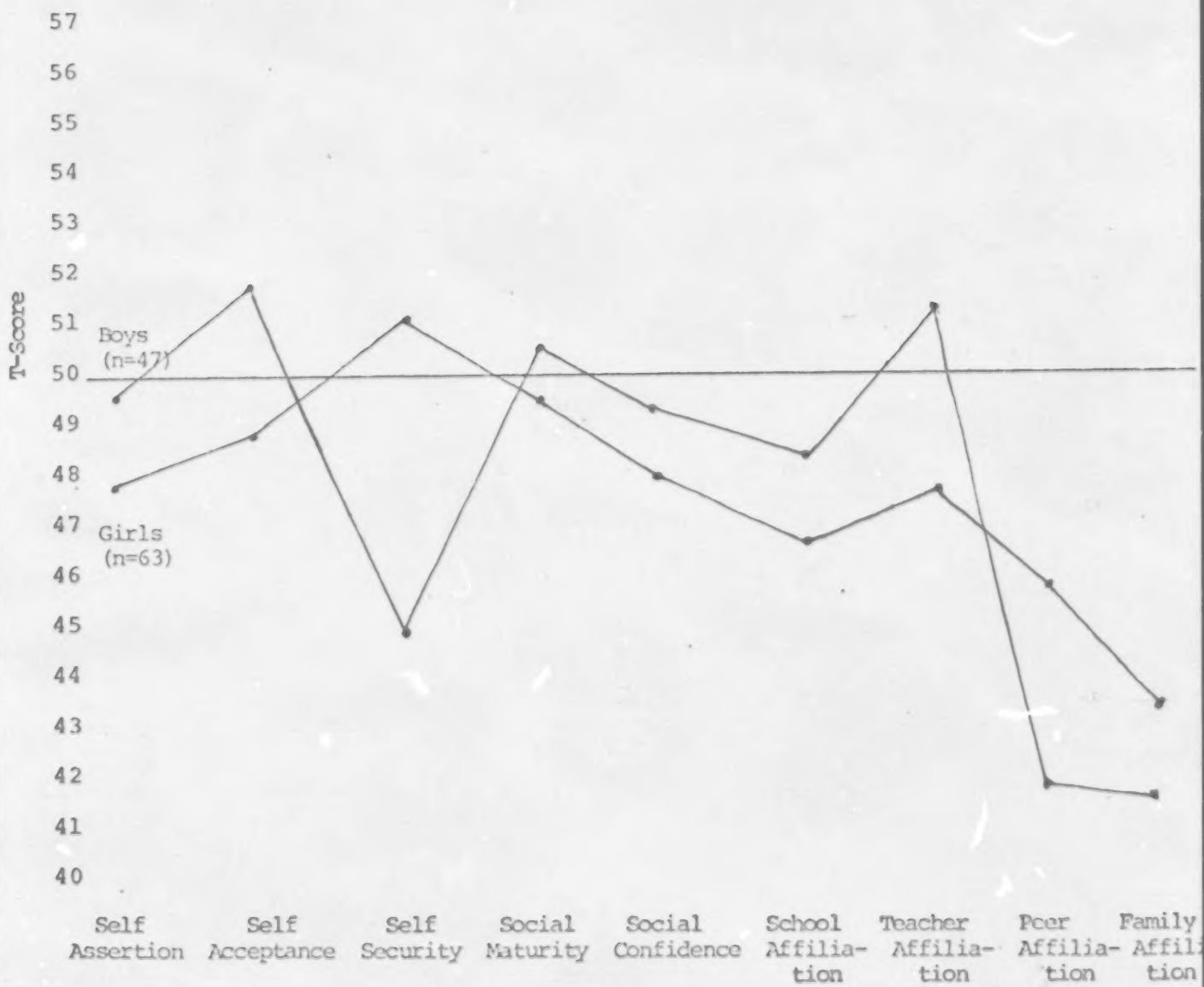


Figure 31. Self Observation Scales, Junior High Level Results, Spring 1975, Grade 9, By Sex, Area IV, Anne Arundel County



Student World of Work Relationships

The Career Maturity Inventory, (CMI), published by CTB/McGraw Hill and developed by Dr. John O. Crites, was used to evaluate student knowledge of relationships, etc. in the world of work. The CMI provides both an attitude scale and a competence test. Three of the five parts in "The Cognitive Test" were administered to the Anne Arundel County students:

1. Part 2: "Knowing about Jobs": an index, according to the author, of the amount of "occupational information" a student possesses.

2. Part 3: "Choosing a Job": "Goal Selection"; how well a student can match "personal characteristics" with occupational requirements.

3. Part 4: "Looking Ahead": an index of a student's ability to allow for the means necessary to achieve a goal; aptly called "Planning".

The full battery of "The Competence Test" could not be administered because of time constraints. The results will be discussed by area. Table 1 illustrates the number of usable returns by area, grade and sex.

Area I

Ninth and eleventh grade students were administered the CMI in Area I. The results of the administration are illustrated in Table 33 and

Figure 32. Career Maturity Inventory Percentile Ranks, Spring 1975 Administration, Grade 9, Area I, Anne Arundel County, By Sex

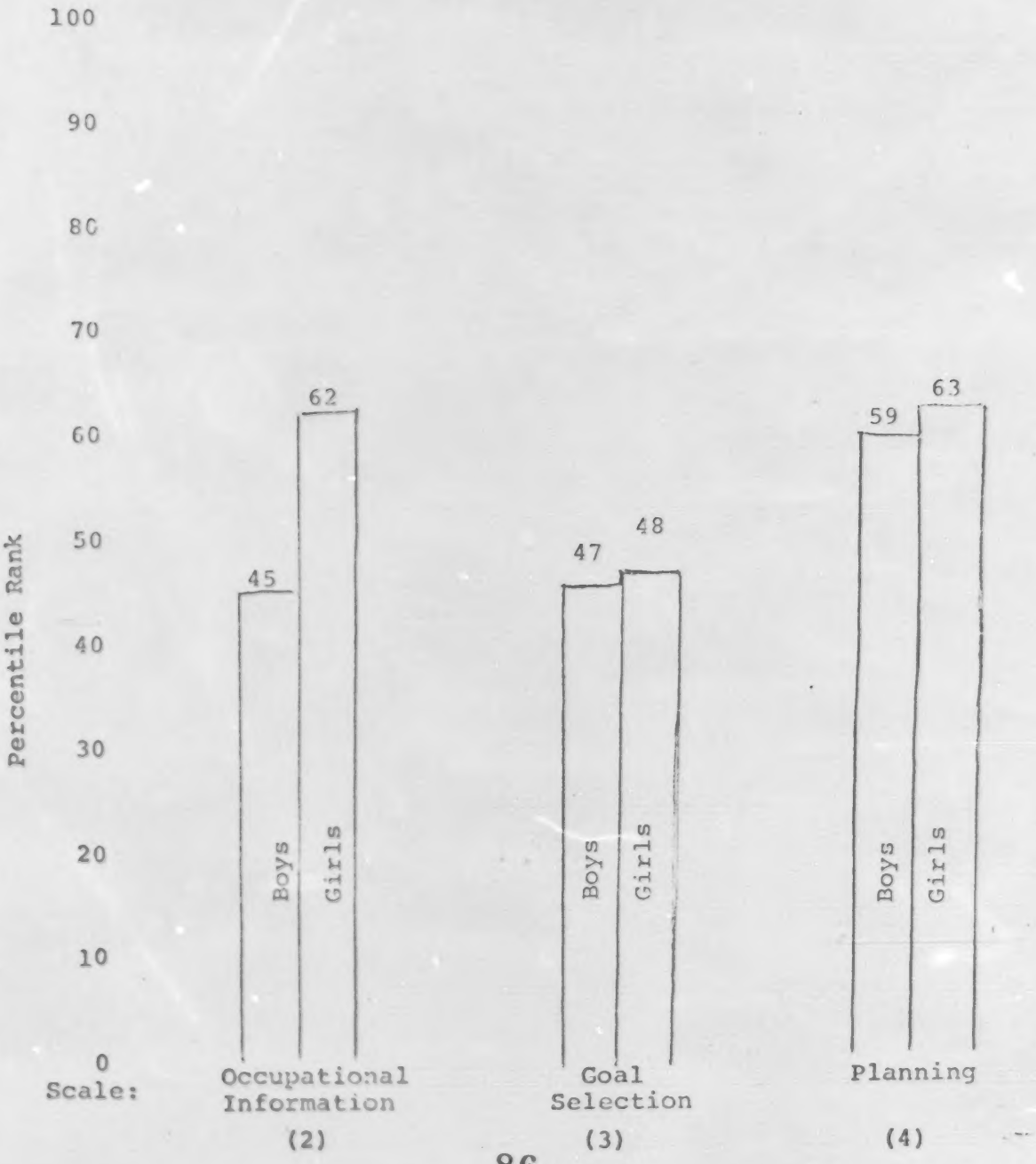
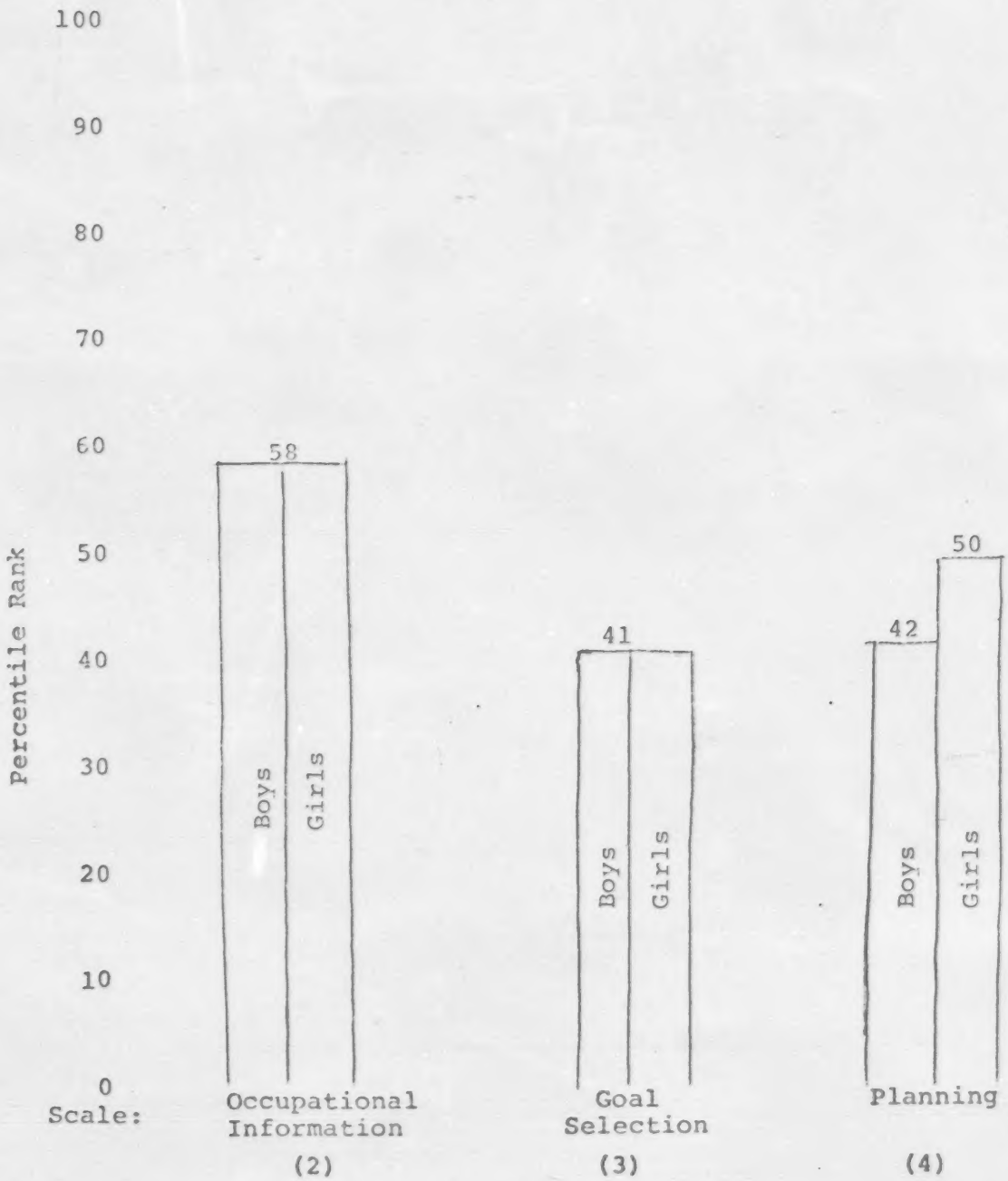


Figure 33. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 11, Area I, Anne Arundel County, By Sex



in Figures 32 and 33. Figure 32 depicts a sex pattern, with ninth grade girls obtaining somewhat higher scores than boys on the three utilized parts of the CMI, Occupational Information, Goal Selection, and Planning. Girls were above their national counterparts in Occupational Information and Planning, while boys were above the fiftieth percentile in Planning only.

As shown in Figure 33, eleventh grade boys and girls were equal in Occupational Information and Goal Selection. As with the ninth grade set, girls were again higher than boys in Planning. The group exceeded the fiftieth percentile only in Occupational Information.

Area II

The results of the ninth and eleventh grade administration in Area II are illustrated in Table 34 (Appendix) and in Figures 34 and 35. The ninth graders were higher than their national counterparts in Occupational Information and Planning; and slightly below the fiftieth percentile in Goal Selection. Girls were higher than boys in Occupational Information (see Figure 34).

A consistent sex pattern manifested itself in the eleventh grade data set, with girls higher than boys in all three areas. Figure 35 also illustrates that the fiftieth percentile was exceeded only in the case of the girls, in Occupational Information.

Area III

Tables 35 and 36, together with Figures 36-39, depict the results of the Career Maturity

Figure 34. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 9, Area II, Anne Arundel County, By Sex

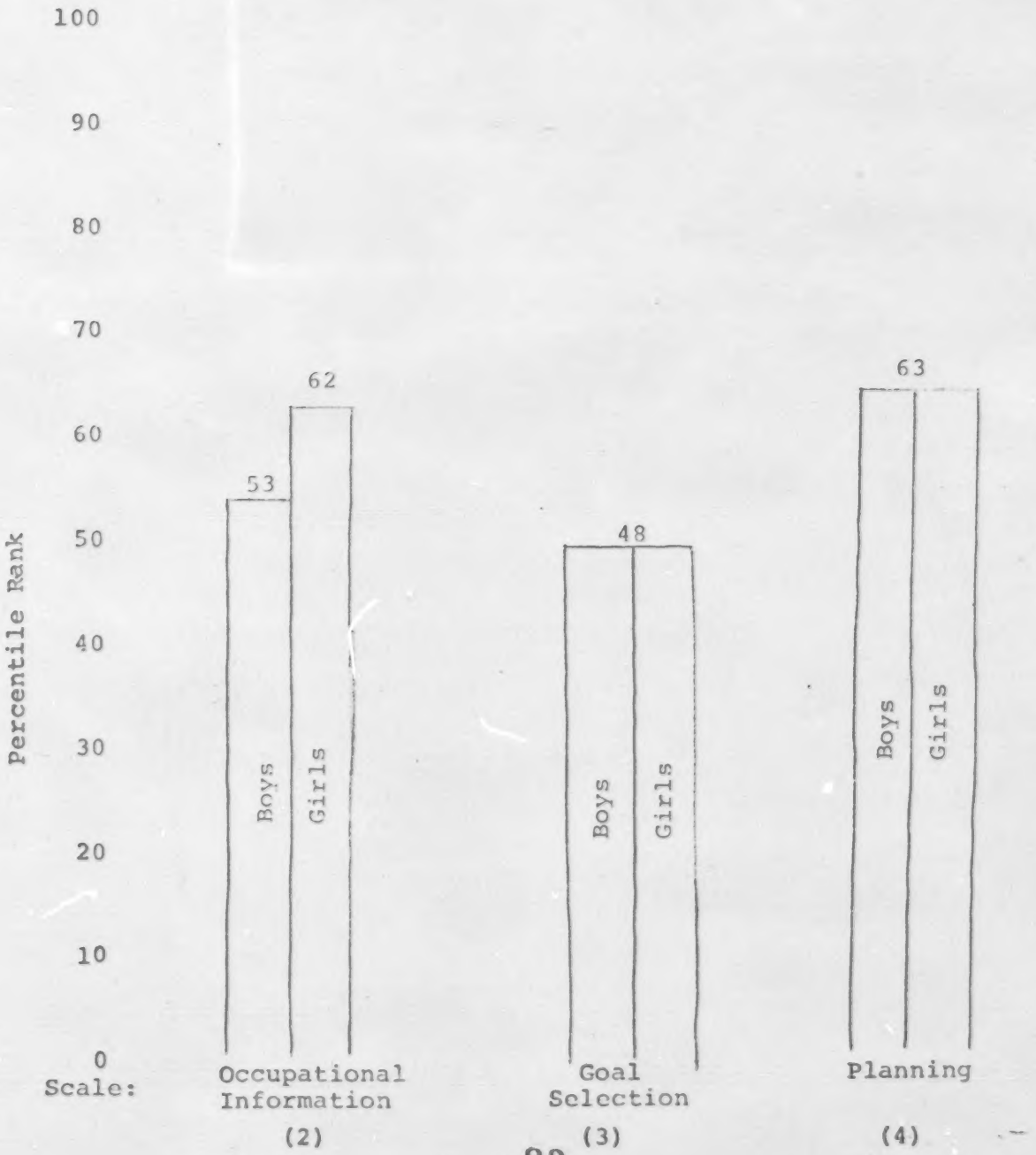


Figure 35. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 11, Area II, Anne Arundel County, By Sex

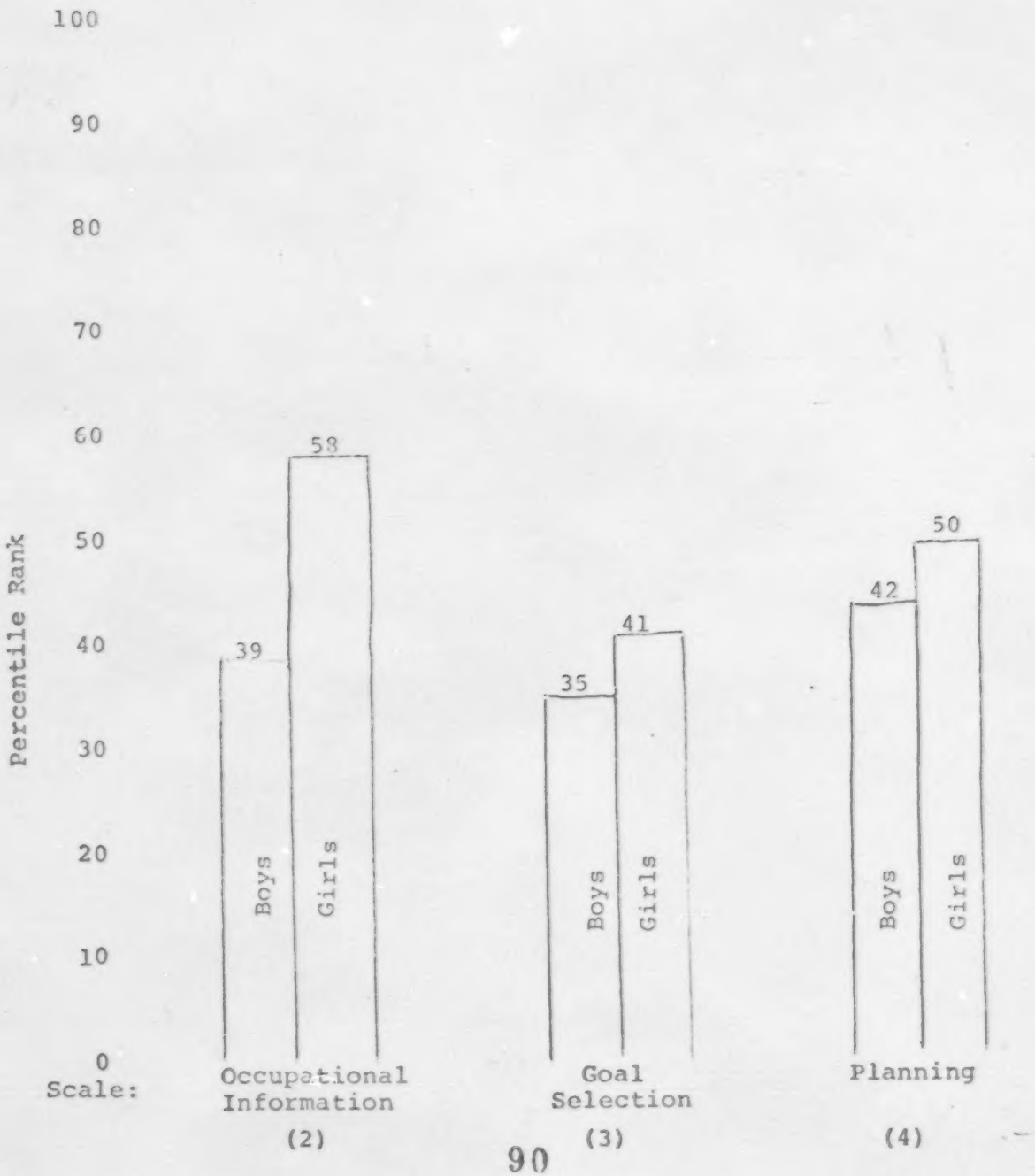
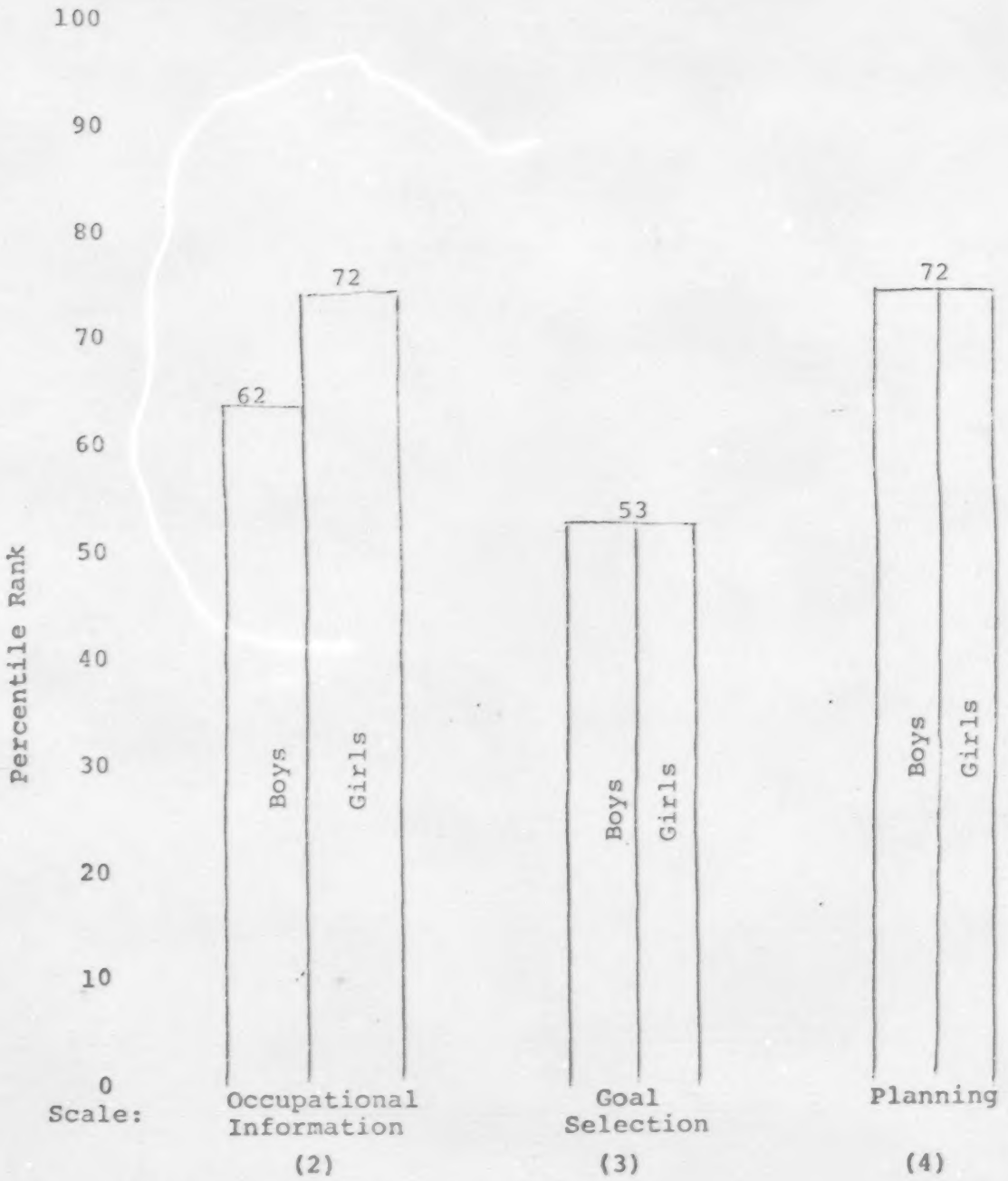


Figure 36. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 9, Area III, Anne Arundel County, By Sex



Inventory administration to the ninth, tenth, eleventh, and twelfth grade students in Area III. As before, with the Self Observation Scales and Decision Making Scale, the small number of students tested in grades 10-12 in this county area places a restriction on result clarity.

The ninth graders, Figure 36, were above their national counterparts in all three areas; (1) Job knowledge; (2) realistic juxtapositions of personal characteristics, with job requirements; and (3) planning ability. Girls were higher than boys in Occupational Information.

Figures 37-39 graphically illustrate the results for the tenth, eleventh, and twelfth graders, respectively. Because of the small numbers reflected by the graphs, the evaluators extent no comments (the interested reader may wish to note Figure 39, which illustrates dramatic fuctuation across scales, by sex; such is often an artifact of too few numbers).

Area IV

Returns were available for ninth grade students only in Area IV. The results are illustrated in Table 37 (Appendix) and in Figure 40. Again, girls were (slightly or more so) higher than boys in all three measured areas. The students exceeded the fiftieth (norming) percentile only in Planning. Boys were low in Job Knowledge (Occupational Information); and girls slightly less so. Girls were high in planning ability.

Figure 37. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 10, Area III, Anne Arundel County, By Sex

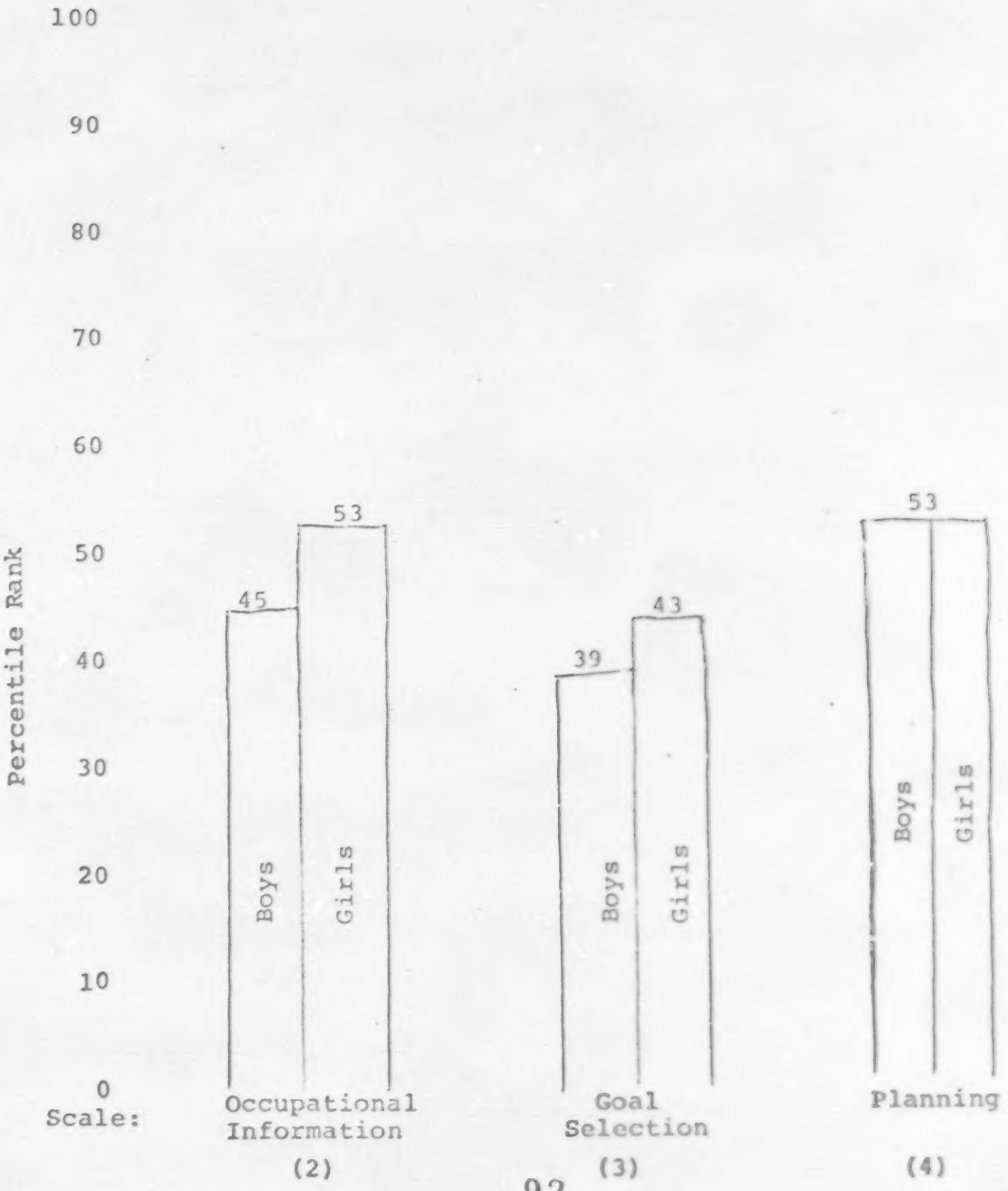


Figure 38. Career Maturity Inventory, Percentile Ranks Spring 1975 Administration, Grade 11, Area III, Anne Arundel County, By Sex

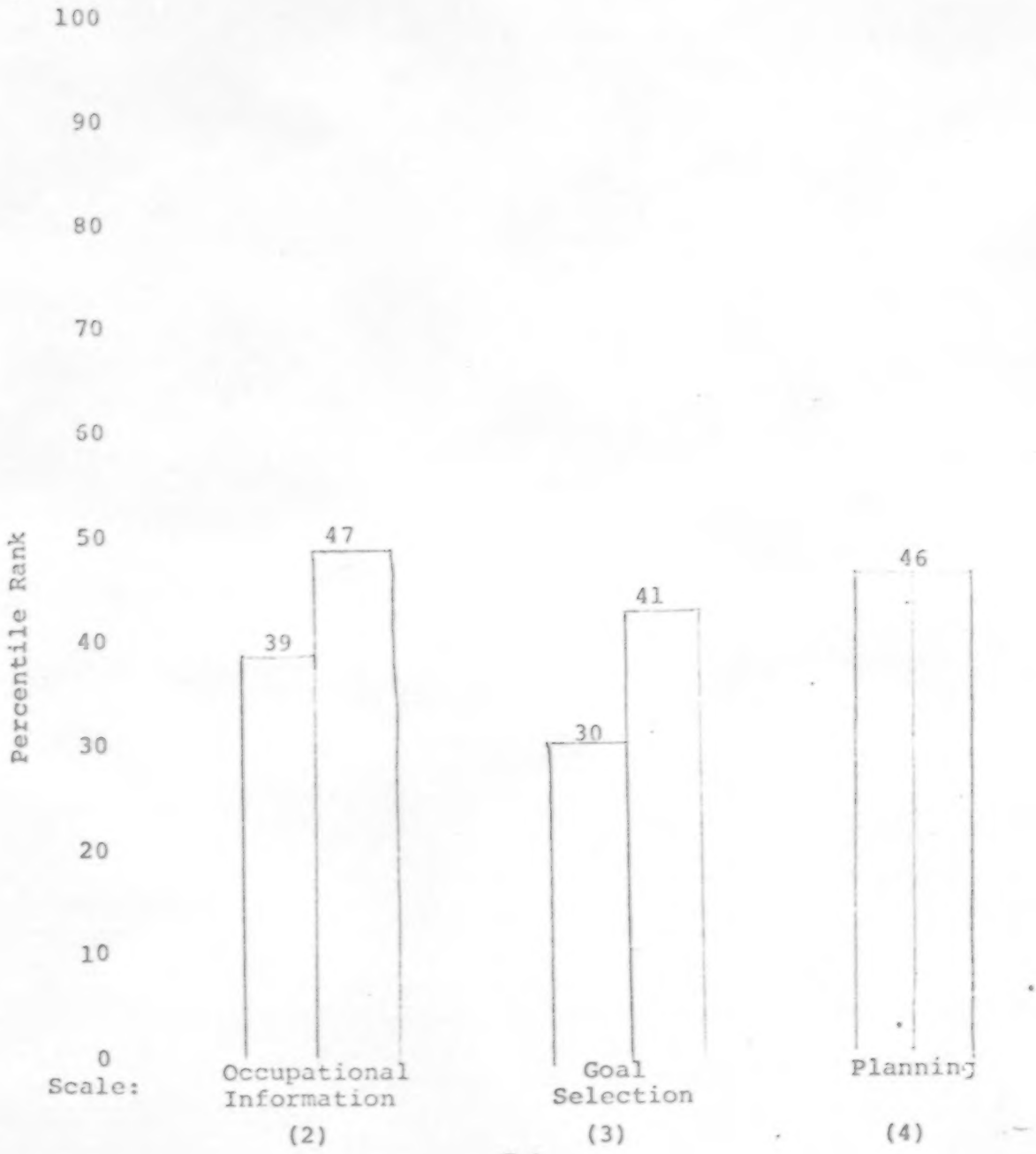


Figure 39. Career Maturity Inventory, Percentile Ranks, Spring 1975 Administration, Grade 12, Area III, Anne Arundel County, By Sex

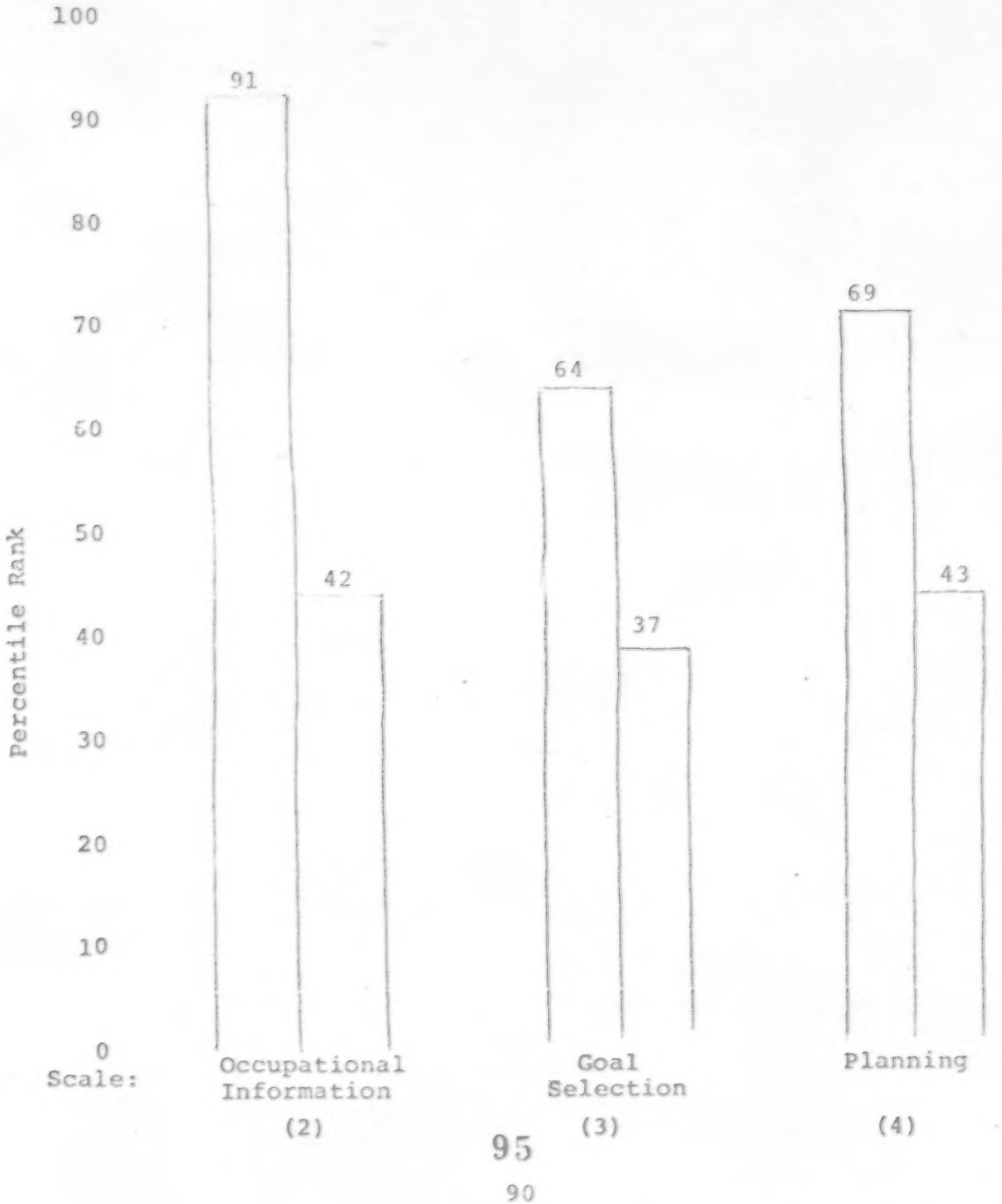
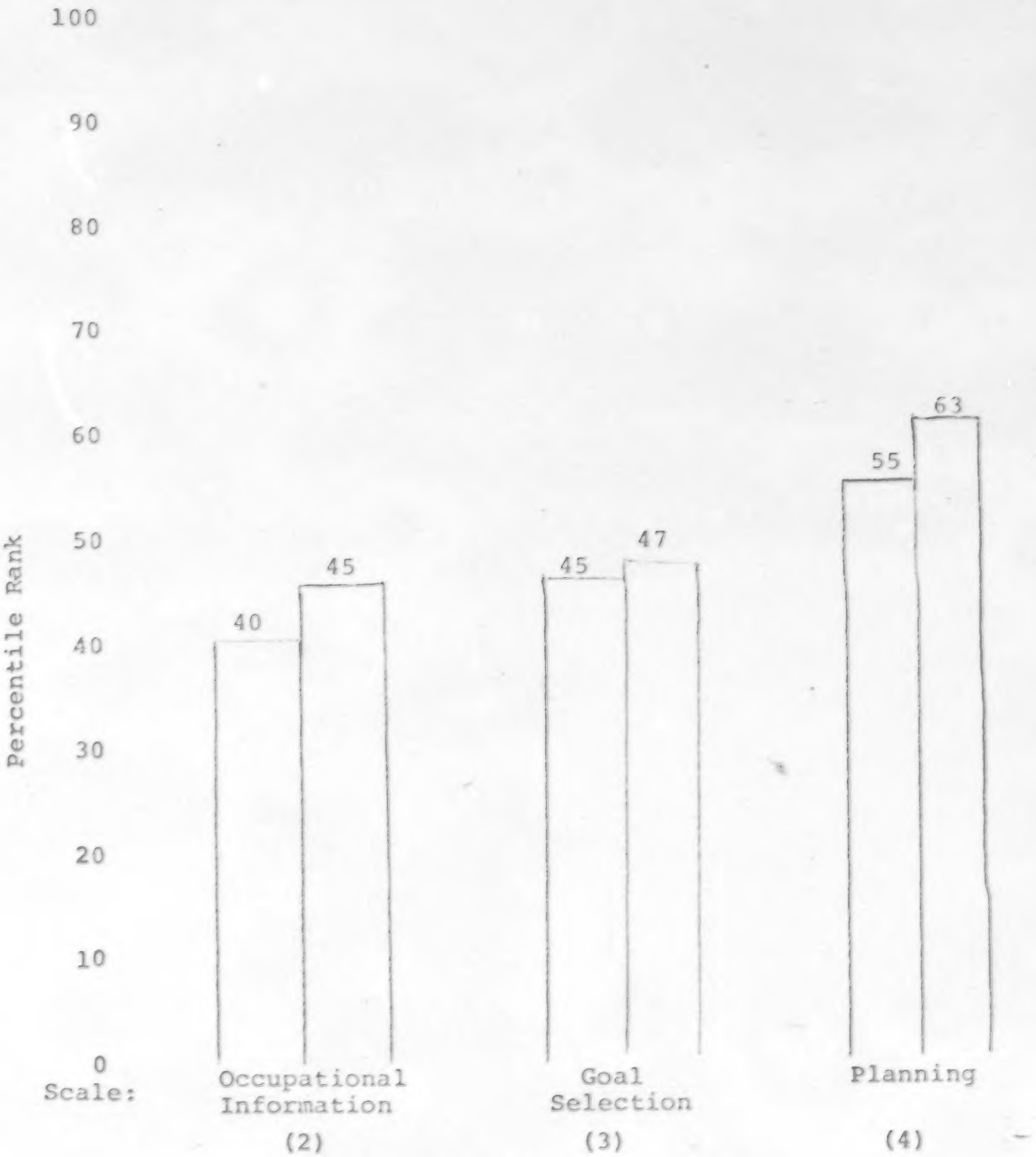


Figure 40. Career Maturity Inventory, Percentile Ranks, Spring 1975, Administration, Grade 9, Area IV , Anne Arundel County, By Sex



Teacher Attitudes/Practices

The Career Education Teacher Survey was utilized to obtain pertinent information regarding the degree to which teachers in Anne Arundel County understood the concepts attendant to the project, had access to project information/materials, implemented project ideas/activities within the classroom, etc. A copy of the scale is attached as on appendix to this report.

Table 38 (Appendix) illustrates the results to question number 1: "Do you feel that you understand the term 'Career Education'?" More than eighty percent of the total respondents and respondents by area, to the questionnaire responded that they did feel they understood the term "Career Education".

The second question asked if the teachers had a copy of the "Career Education Curriculum Guide" or the "Guide" Objectives. Table 39 (Appendix) illustrates the results. Of the teachers who responded to the items, an appreciable percentage from Areas I-III indicated that they did have materials on hand. The percentage in Area IV, the last area to be included in the project, was considerable lower than for I-III, but still slightly above 50 percent.

The results of the third question (see Table 40-Appendix) indicated that again an appreciable proportion of the teachers in area I-III had included objectives from the "Career Education Curriculum Guide" in their lesson plans during the school year. The percentage of teachers from Area IV was lower than that of the other areas, but still quite large (54.9 percent).

The results of item number six, as to whether Career Education should be either an integral part of or sepearate from the normal curriculum, as opposed to 21.7 percent who felt it shoud not, and 24.5 percent who were "not sure". The pattern of results by area was similar.

Responses to item number seven (see Table 42-Appendix) indicated that a fair number of teachers by area had worked with the resource person for Career Education, sometime during the school year. Career Education orientation and Resource Materials were the dominant areas. Item eight (see Table 43-Appendix) is related to item seven, and indicates that as high as 65.2 percent of the teachers (Area III) did not use the cognizant of his/her existence. The area which revealed the highest percentage (29.9 percent) of ignorance of the resource person was Area IV - which is not surprising.

Items nine, ten, and eleven are interrelated, and have to do with whether there was a mini-resource center in the teachers' school, whether they used it, and whether their students used it. Forty-five percent indicated that there was a mini-resource center; 32.1 percent were not sure (see Table 44-Appendix). The percentage of teachers who responded that they had used the center ranged from 24.8 (Area I) to 37.9 (Area II), as indicated in Table 45-Appendix. The figures for student use (see Table 46-Appendix) were patterned similarly to those of teacher use; ranging from 27.9 percent in Area I to 34.7 percent in Area II.

The eleventh and twelfth items on the Teacher Survey (see Table 47 and 48, respectively-Appendix) are also interrelated, and have to do with the existence of a "Technology Center" in the elementary schools, and teacher use of the center. A total of 35.1 percent of the elementary teachers in Area II to 27.8 percent in Area III.

Fifty-two and two tenths percent of the teachers acknowledged the presence of a counselor in their schools (see Table 49-Appendix), with involvement figures ranging from 41.8 percent in Area IV to 57.2 percent in Area II (see Table 50-Appendix), for "involvement area" 5 - "other".

Tables 51 through 54 (Appendix) illustrates teacher response to frequency of use of 14 listed Career Education activities. These results should be viewed carefully, as gross numbers and percentages can lead the reader astray. One would not expect a teacher, as an example, to go on a field trip every day, but a high usage figure in "integration of basic skills with Career Education" is desired.

Summary

The following general statements may be made regarding the results of the Career Maturity Inventory, "Competency Test" section, administration in Anne Arundel County:

1. Excluding the tenth, eleventh, and twelfth grade results in Area III:

   A. When sex difference occurred, the patterns were the same across the three measures; girls higher than boys.

   B. Both boys and girls approximated the fiftieth percentile more often in Goal Selection than on the other two measures.

2. With the same exclusion as in 1, above, the Anne Arundel County students, as a group, deviated little from the average expected in job knowledge, realistic job choice, and planning ability (the most notable exception being that of the ninth grade results in Area III).

A P P E N D I X

Table 4. Results of Administration of the Decision Making Scale, Spring 1975, Area I, Grade 9, By Sex, Anne Arundel County, Total n=96

	Sex			
	Male (n=52)		Female (n=44)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	54.0	10.1	46.9	7.8
Group Integration	47.2	8.7	51.3	9.4
Leadership/Assertiveness	54.0	10.1	48.3	10.1
Independence/Responsibility	51.3	10.1	50.7	10.3
Task-Decision Insularity[3]	49.6	10.6	48.3	11.0
Logical Entropy	45.2	9.8	49.9	8.6

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 5. Results of Administration of the Decision Making Scale, Spring 1975, Area I, Grade 11, By Sex, Anne Arundel County, Total n=70

	Sex			
	Male (n=30)		Female (n=40)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	55.1	9.2	46.1	8.4
Group Integration	45.9	8.5	50.6	8.5
Leadership/Assertiveness	49.7	9.5	43.7	9.4
Independence/Responsibility	49.1	9.7	47.5	9.4
Task-Decision Insularity[3]	52.4	7.6	52.5	8.4
Logical Entropy	51.7	11.2	54.9	8.0

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 6. Results of Administration of the Decision Making Scale, Spring 1975, Area II, Grade 9, By Sex, Anne Arundel County, Total n=99

	Sex			
	Male (n=45)		Female (n=54)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	53.3	9.2	44.5	9.9
Group Integration	49.3	10.8	57.1	9.4
Leadership/Assertiveness	54.5	8.6	46.7	9.4
Independence/Responsibility	51.6	10.0	52.8	12.8
Task-Decision Insularity[3]	50.4	8.9	52.7	9.5
Logical Entropy	45.4	8.6	49.7	9.2

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 7. Results of Administration of the Decision Making Scale, Spring 1975, Area II, Grade 11, By Sex, Anne Arundel County; Total n=64

	Sex			
	Male (n=41)		Female (n=23)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	53.2	9.4	43.9	9.1
Group Integration	48.9	9.3	50.2	10.4
Leadership/Assertiveness	50.1	10.8	44.8	8.1
Independence/Responsibility	50.2	10.3	46.3	7.5
Task-Decision Insularity[3]	52.8	8.3	54.1	9.3
Logical Introp/	50.9	10.1	56.0	9.8

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 8. Results of Administration of the Decision Making Scale, Spring 1975, Area III, Grade 9, By Sex, Anne Arundel County, Total n=94

	Sex			
	Male (n=46)		Female (n=48)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	50.6	10.2	49.0	9.4
Group Integration	48.1	9.3	51.7	9.6
Leadership/Assertiveness	48.9	11.4	49.3	9.5
Independence/Responsibility	48.9	12.7	50.0	8.1
Task-Decision Insularity[3]	49.9	9.5	52.9	9.5
Logical Entropy	49.1	12.6	49.3	10.1

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 9. Results of Administration of the Decision Making Scale, Spring 1975, Area III, Grade 10, By Sex, Anne Arundel County, Total n= 17

Scale:	Sex: Male (n= 5) $\bar{X}$	S.D.[2]	Female (n=12) $\bar{X}$[1]	S.D.[2]
Decision Integrity	58.4	8.9	50.6	9.1
Group Integration	53.8	9.0	49.7	10.3
Leadership/Assertiveness	57.9	5.0	49.3	11.2
Independence/Responsibility	48.8	4.7	49.4	9.5
Task-Decision Insularity[3]	40.3	10.6	46.4	9.7
Logical Intergy	44.2	6.9	49.3	6.9

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 10. Results of Administration of the Decision Making Scale, Spring 1975, Area III,Gradell, By Sex, Anne Arundel County, Total n= 11

	Sex			
	Male (n= 6)		Female (n= 5)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	51.4	8.9	54.2	5.0
Group Integration	49.3	9.0	58.6	14.8
Leadership/Assertiveness	54.9	6.4	58.2	9.4
Independence/Responsibility	55.0	8.7	57.8	13.6
Task-Decision Insularity[3]	38.1	16.1	47.2	11.2
Logical Entropy	47.2	4.3	47.5	9.6

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 11. Results of Administration of the Decision Making Scale, Spring 1975, Area III, Grade 12, By Sex, Anne Arundel County, Total n= 19

	Sex			
	Male (n=12)		Female (n= 7)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	43.0	7.3	42.8	9.8
Group Integration	44.4	10.5	45.1	6.3
Leadership/Assertiveness	48.7	9.8	44.4	6.9
Independence/Responsibility	45.8	7.3	43.7	4.1
Task-Decision Insularity[3]	58.2	7.4	56.2	7.2
Logical Entropy	57.5	8.0	53.9	9.7

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 12. Results of Administration of the Decision Making Scale, Spring 1975, Area IV, Grade 9, By Sex, Anne Arundel County, Total n= 103

	Sex			
	Male (n=61)		Female (n=42)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Decision Integrity	50.9	10.1	45.4	9.2
Group Integration	50.6	9.3	56.1	9.8
Leadership/Assertiveness	53.0	8.8	48.2	8.1
Independence/Responsibility	53.3	10.9	51.2	13.9
Task-Decision Insularity[3]	47.1	11.0	50.5	10.1
Logical-Entropy	45.4	10.7	49.0	9.0

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

[3] Low score = good

Table 14. Results of Self Observation Scales, Primary Level, Fall, 1974, Grade 3, By Area and Sex, Anne Arundel County

Scale:	Area II				Area III				Area IV			
	Boys (n=66)		Girls (n=51)		Boys (n=58)		Girls (n-61)		Boys (n=44)		Girls (n=66)	
	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+
Self Acceptance	48.5	9.7	51.1	9.5	48.9	9.9	52.2	9.8	49.3	10.6	49.2	9.3
Social Maturity	46.5	9.9	50.8	9.2	51.9	8.8	54.5	7.6	51.1	9.1	54.2	8.1
School Affiliation	41.0	12.3	49.2	10.9	46.0	12.2	52.3	9.2	46.6	10.5	51.8	10.0
Self Security	54.7	7.9	51.4	8.5	54.7	8.4	54.4	7.4	52.1	8.2	50.2	8.6
Achievement Motivation	48.3	10.3	49.3	10.1	49.0	9.9	50.2	9.0	50.1	8.1	52.8	8.5

No pretest data for Area I

* Mean=Average score

\+ S.D.=standard deviation

Table 15. Results of Self Observation Scales, Intermediate Level, Fall 1974, Grade 6, By Area and Sex, Anne Arundel County

Area [1]

	II				III				IV			
	Boys (n=62)		Girls (n=49)		Boys (n=56)		Girls (n=58)		Boys (n=57)		Girls (n=70)	
Scale:	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+	$\bar{X}$*	S.D.+
Self Acceptance	48.7	10.9	51.1	9.8	52.0	8.1	51.7	10.7	52.4	8.9	51.7	10.4
Social Maturity	51.0	10.8	48.3	10.1	52.1	9.9	48.9	10.1	52.6	9.8	49.2	11.1
School Affiliation	48.3	12.1	51.4	7.4	52.3	9.8	53.4	8.5	51.8	9.5	51.9	10.0
Self Security	49.3	8.7	50.0	7.9	51.6	8.4	52.5	7.6	51.9	9.3	52.6	9.7
Achievement Motivation	45.4	11.0	51.3	10.7	47.3	10.1	50.8	11.1	50.4	11.6	53.4	9.5
Social Confidence	43.8	13.4	51.1	7.3	50.1	8.9	50.2	8.7	50.2	9.8	51.9	9.0
Teacher Affiliation	50.7	10.3	49.4	10.1	51.7	9.4	49.9	10.1	53.0	8.0	50.5	10.6
Peer Affiliation	51.3	5.1	49.0	5.5	49.0	5.8	49.8	4.7	48.8	4.8	50.5	4.7

1 No pretest data for Area I

* Mean = Average Score

\+ S.D.= standard deviation

Table 16. Results of Self Observation Scales, Primary Level, Spring 1975, Grade 3, By Sex, Area I, Anne Arundel County

	Sex			
	Boys (n=60)		Girls (n=64)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	40.3	11.0	42.9	9.5
Social Maturity	47.0	11.4	49.9	11.6
School Affiliation	38.7	13.0	43.1	11.8
Self Security	49.2	9.6	50.0	9.3
Achievement Motivation	-	-	-	-

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 17. Results of Self Observation Scales, Intermediate Level, Spring 1975, Grade 6, By Sex, Area I, Anne Arundel County

	Sex			
	Boys (n=53)		Girls (n-49)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	49.2	12.3	52.7	9.7
Social Maturity	53.0	9.8	50.5	9.1
School Affiliation	49.6	11.5	53.8	8.6
Self Security	54.0	8.3	56.1	6.2
Achievement Motivation	47.2	11.2	52.0	9.2
Social Confidence	47.5	12.7	51.7	9.0
Teacher Affiliation	52.3	8.4	51.8	9.1
Peer Affiliation	51.9	5.4	50.3	5.4

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 18. Results of Self Observation Scales, Junior High Level, Spring 1975, Grade 9, By Sex, Area I, Anne Arundel County

	Sex			
	Boys (n=46)		Girls (n=52)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	48.4	9.5	46.4	9.6
Self Acceptance	51.1	9.5	49.0	10.6
Self Security	45.5	8.7	52.7	6.9
Social Maturity	50.8	9.1	56.8	6.6
Social Confidence	50.8	10.1	46.7	8.4
School Affiliation	47.6	9.5	47.7	11.4
Teacher Affiliation	50.0	9.4	51.1	9.3
Peer Affiliation	46.2	10.4	49.2	10.3
Family Affiliation	45.1	11.2	47.0	12.2

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 19. Results of Self Observation Scales, Senior High Level, Spring 1975, Grade 11, By Sex, Area I, Anne Arundel County

	Sex			
	Boys (n=36)		Girls (n=34)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	50.8	8.0	51.4	9.0
Self Acceptance	52.3	8.2	47.8	10.2
Self Security	45.9	8.6	53.5	7.2
Social Maturity	53.4	6.7	54.4	7.8
Social Confidence	49.8	8.9	50.9	10.4
School Affiliation	51.1	7.6	50.8	9.0
Teacher Affiliation	50.0	11.3	50.7	10.0
Peer Affiliation	51.9	10.7	51.1	11.8
Family Affiliation	51.4	9.0	49.6	11.8

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 20. Results of Self Observation Scales, Primary Level, Spring 1975, Grade 3, By Sex, Area II, Anne Arundel County

	Sex			
	Boys (n=72)		Girls (n=48)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	44.0	8.9	43.8	13.4
Social Maturity	49.3	11.2	50.7	10.2
School Affiliation	37.7	11.8	41.4	15.4
Self Security	52.0	8.6	48.4	11.5
Achievement Motivation	-	-	-	-

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 21. Results of Self Observation Scales, Intermediate Level, Spring 1975, Grade 6, By Sex, Area II, Anne Arundel County

	Sex			
	Boys (n=59)		Girls (n=54)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	51.1	9.9	53.1	7.7
Social Maturity	53.1	10.3	51.8	10.2
School Affiliation	50.2	10.4	52.9	6.3
Self Security	51.9	8.8	53.7	7.2
Achievement Motivation	45.7	10.3	48.4	11.3
Social Confidence	46.7	12.0	51.1	7.6
Teacher Affiliation	51.9	9.8	51.9	8.8
Peer Affiliation	48.7	5.6	49.2	5.3

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 22. Results of Self Observation Scales, Junior High Level, Spring 1975, Grade 9, By Sex, Area II, Anne Arundel County

	Sex			
	Boys (n= 59)		Girls (n= 52)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	46.8	10.8	46.0	8.7
Self Acceptance	53.6	10.2	48.8	9.4
Self Security	41.9	10.1	53.4	7.3
Social Maturity	49.8	8.3	53.1	8.7
Social Confidence	49.8	8.4	50.3	8.9
School Affiliation	47.3	9.9	44.6	10.9
Teacher Affiliation	47.9	10.1	51.6	7.7
Peer Affiliation	41.2	12.8	42.9	12.5
Family Affiliation	40.6	10.6	42.5	12.3

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 23. Results of Self Observation Scales, Senior High Level, Spring 1975, Grade 11, By Sex, Area II, Anne Arundel County

	Sex			
	Boys (n=36)		Girls (n=41)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	44.3	14.5	50.2	10.1
Self Acceptance	54.3	9.8	48.4	9.9
Self Security	41.6	10.4	53.5	6.6
Social Maturity	51.7	7.8	54.3	8.2
Social Confidence	45.8	9.7	51.9	10.4
School Affiliation	45.3	10.8	49.5	10.2
Teacher Affiliation	49.1	11.2	52.1	10.0
Peer Affiliation	43.1	14.4	51.3	10.9
Family Affiliation	43.2	9.7	47.1	11.0

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 24. Results of Self Observation Scales, Primary Level, Spring 1975, Grade 3, By Sex, Region III, Anne Arundel County

	Sex			
	Boys (n=58)		Girls (n=64)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	47.2	10.7	51.4	8.6
Social Maturity	50.4	8.7	55.5	7.7
School Affiliation	43.6	13.0	51.0	11.2
Self Security	50.3	9.8	53.7	10.4
Achievement Motivation	-	-	-	-

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D.= Standard Deviation

Table 25. Results of Self Observation Scales, Intermediate Level, Spring 1975, Grade 6, By Sex, Region III, Anne Arundel County

	Sex			
	Boys (n=56)		Girls (n=55)	
Scales:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	49.2	10.2	54.8	9.3
Social Maturity	51.5	11.5	51.3	9.4
School Affiliation	50.7	11.3	53.9	9.0
Self Sexuality	52.0	9.4	53.5	9.0
Achievement Motivation	46.4	11.2	51.7	10.5
Social Confidence	47.5	10.7	51.5	10.7
Teacher Affiliation	50.3	11.2	53.0	8.6
Peer Affiliation	49.7	5.2	50.7	4.9

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 26. Results of Self Observation Scales, Junior High Level, Spring 1975, Grade 9, By Sex, Area III, Anne Arundel County

	Sex			
	Boys (n=44)		Girls (n=49)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	48.7	9.1	50.2	10.1
Self Acceptance	51.9	11.3	49.2	8.8
Self Security	42.3	8.9	55.0	5.8
Social Maturity	52.3	8.3	53.2	10.1
Social Confidence	47.3	7.9	51.0	10.4
School Affiliation	49.2	10.8	50.6	10.8
Teacher Affiliation	49.2	11.5	53.0	8.2
Peer Affiliation	48.9	11.1	54.1	6.7
Family Affiliation	47.6	10.7	50.9	11.0

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 27. Results of Self Observation Scales, Senior High Level, Spring 1975, Grade 10, By Sex, Area III, Anne Arundel County

	Sex			
	Boys (n= 7)		Girls (n= 5)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	48.3	4.7	55.9	3.3
Self Acceptance	48.9	10.4	48.9	10.2
Self Security	40.4	11.3	46.5	10.6
Social Maturity	47.6	9.3	48.0	7.7
Social Confidence	41.9	6.5	45.8	7.6
School Affiliation	44.3	10.7	45.1	9.7
Teacher Affiliation	48.7	9.9	49.7	8.4
Peer Affiliation	44.0	13.5	41.0	12.2
Family Affiliation	43.7	10.9	40.5	8.3

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 28. Results of Self Observation Scales, Senior High Level, Spring 1975, Grade 11, Area III, Anne Arundel County

	Sex			
	Boys (n=7)		Girls (n=10)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	40.5	18.0	48.4	11.5
Self Acceptance	50.5	9.2	49.7	11.5
Self Security	37.1	6.4	55.8	4.2
Social Maturity	44.5	3.8	46.0	8.5
Social Confidence	42.6	7.0	46.6	5.3
School Affiliation	47.1	12.4	48.0	10.3
Teacher Affiliation	47.1	14.9	48.1	10.0
Peer Affiliation	46.6	15.2	47.0	15.3
Family Affiliation	41.3	11.1	43.2	12.6

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 29. Results of Self Observation Scales, Primary Level, Spring 1975, Grade 3, By Sex, Area IV, Anne Arundel County

	Sex			
	Boys (n=56)		Girls (n=91)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	45.3	10.8	47.6	9.2
Social Maturity	48.5	11.6	53.4	9.7
School Affiliation	40.5	13.4	47.4	13.2
Self Security	50.6	8.7	49.1	10.5
Achievement Motivation	-	-	-	-

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = Standard Deviation

Table 30. Results of Self Observation Scales, Intermediate Level, Spring 1975, Grade 6, By Sex, Area IV, Anne Arundel County

	Sex			
	Boys (n=85)		Girls (n-97)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Acceptance	52.6	8.0	53.8	8.0
Social Maturity	53.9	9.2	48.1	11.1
School Affiliation	53.9	6.3	53.6	8.0
Self Security	54.3	7.7	52.1	9.1
Achievement Motivation	46.7	11.2	53.3	9.3
Social Confidence	49.5	10.6	52.6	7.3
Teacher Affiliation	54.0	7.2	50.6	10.2
Peer Affiliation	49.2	5.2	51.3	5.1

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 31. Results of Self Observation Scales, Junior High Level, Spring 1975, Grade 9, By Sex, Area IV, Anne Arundel County

	Sex			
	Boys (n=47)		Girls (n=63)	
Scale:	$\bar{X}$[1]	S.D.[2]	$\bar{X}$[1]	S.D.[2]
Self Assertion	49.6	7.8	47.8	10.8
Self Acceptance	51.7	10.2	48.8	9.7
Self Security	44.9	9.5	51.0	8.7
Social Maturity	50.4	8.8	49.5	9.8
Social Confidence	49.4	8.7	47.8	8.9
School Affiliation	48.5	9.3	46.8	11.4
Teacher Affiliation	51.5	8.1	47.6	9.9
Peer Affiliation	42.4	11.9	45.5	11.4
Family Affiliation	42.3	11.5	43.4	12.0

[1] $\bar{X}$ = Mean (average) T-score

[2] S.D. = standard deviation

Table 32. Number of Usable Respondents to the Career Maturity Inventory, Competence Test, Spring 1975, Anne Arundel County, By Area, Grade, and Sex

Area I

Sex	Grade 9	Grade 11	Area Total
Males	49	37	160
Females	50	24	
Total	99	61	

Area II

Sex	Grade 9	Grade 11	Area Total
Males	25	39	126
Females	11	51	
Total	36	90	

Area III

Sex	Grade 9	Grade 10	Grade 11	Grade 12	Area Total
Males	45	7	13	14	157
Females	47	14	5	12	
Total	92	21	18	26	

Area IV

Grade 9

Males =	39
Females =	58
Total	97

Table 33. Results of the Career Maturity Inventory, Spring 1975, Grades 9 and 11, Area I, By Sex, Anne Arundel County

Ninth Grade

Sex

Scale:	Males (n=49) Raw Score*	Males (n=49) Percentile	Females (n=50) Raw Score*	Females (n=50) Percentile
Occupational Information[1]	12	45	14	62
Goal Selection[2]	10	47	11	48
Planning[3]	9	59	10	63

Eleventh Grade

	Males (n=37) Raw Score*	Males (n=37) Percentile	Females (n=24) Raw Score*	Females (n=24) Percentile
Occupational Information[1]	16	58	16	58
Goal Selection[2]	13	41	13	41
Planning[3]	10	42	12	50

[1]Competence test Part 2: Knowing About Jobs
[2]Competence test Part 3: Choosing a Job
[3]Competence test Part 4: Looking Ahead
*Average

Table 34. Results of the Career Maturity Inventory, Spring 1975, Grades 9 and 11, Area II, By Sex, Anne Arundel County

Ninth Grade

Sex

Scale:	Males (n=25) Raw Score*	Males (n=25) Percentile	Females (n=11) Raw Score*	Females (n=11) Percentile
Occupational Information[1]	13	53	14	62
Goal Selection[2]	11	48	11	48
Planning[3]	10	63	10	63

Eleventh Grade

	Males (n=39) Raw Score*	Males (n=39) Percentile	Females (n=51) Raw Score*	Females (n=51) Percentile
Occupational Information[1]	14	39	16	58
Goal Selection[2]	12	35	13	41
Planning[3]	10	42	12	50

[1]Competence test Part 2: Knowing About Jobs
[2]Competence test Part 3: Choosing a Job
[3]Competence test Part 4: Looking Ahead
*Average

Table 35. Results of the Career Maturity Inventory, Spring 1975, Grades 9 and 10, Area III, By Sex, Anne Arundel County

Ninth Grade

Sex

Scale:	Males (n=45) Raw Score*	Males (n=45) Percentile	Females (n=47) Raw Score*	Females (n=47) Percentile
Occupational Information[1]	14	62	15	72
Goal Selection[2]	12	53	12	53
Planning[3]	13	72	13	72

Tenth Grade

	Males (n= 7) Raw Score*	Males (n= 7) Percentile	Females (n=14) Raw Score*	Females (n=14) Percentile
Occupational Information[1]	13	45	14	53
Goal Selection[2]	10	39	11	43
Planning[3]	11	53	11	53

[1]Competence test Part 2: Knowing About Jobs
[2]Competence test Part 3: Choosing a Job
[3]Competence test Part 4: Looking Ahead
*Average

Table 36. Results of the Career Maturity Inventory, Spring 1975, Grades 11 and 12, Area III, By Sex, Anne Arundel County

Eleventh Grade

Sex

Scale:	Males (n=13) Raw Score*	Males (n=13) Percentile	Females (n= 5) Raw Score*	Females (n= 5) Percentile
Occupational Information[1]	14	39	15	47
Goal Selection[2]	11	30	13	41
Planning[3]	11	46	11	46

Twelfth Grade

	Males (n=14) Raw Score*	Males (n=14) Percentile	Females (n= 12) Raw Score*	Females (n= 12) Percentile
Occupational Information[1]	19	91	15	42
Goal Selection[2]	16	64	13	37
Planning[3]	16	69	12	43

[1]Competence test Part 2: Knowing About Jobs
[2]Competence test Part 3: Choosing a Job
[3]Competence test Part 4: Looking Ahead
*Average

Table 37. Results of the Career Maturity Inventory, Spring 1975, Grade 9, Area IV, By Sex, Anne Arundel County

	Grade			
	Sex			
	Males (n=39)		Females (n=58)	
Scale:	Raw Score*	Percentile	Raw Score*	Percentile
Occupational Information[1]	11	40	12	45
Goal Selection[2]	9	45	10	47
Planning[3]	8	55	10	63

[1]Competence test Part 2: Knowing About Jobs
[2]Competence test Part 3: Choosing a Job
[3]Competence test Part 4: Looking Ahead
*Average

Table 38. Responses by Area, Question #1, Teacher Survey, Anne Arundel County, Spring 1975, "Do you feel that you understand the term 'Career Education'?"

Area		Response (1) Yes	(2) No	(3) Not Sure	Area Total	
I	n	499	14	61	574	
	% of area total	86.9	2.4	10.6		
II	n	344	10	54	408	
	% of area total	84.3	2.5	13.2		
III	n	246	6	24	276	
	% of area total	89.1	2.2	8.7		
IV	n	318	17	41	376	
	% of area total	84.6	4.5	10.9		
	Total	1407	47	180	1634	GT
	% of GT	86.1	2.9	11.0		

Table 39. Results by Area, Anne Arundel County Teachers; "Do you have a copy of the Career Education Curriculum Guide or a set of objectives from the Guide?"

Area		Response (1) Yes	Response (2) No	Area Total	
I	n	444	123		
	% of area total	78.3	21.7	567	
II	n	347	59	406	
	% of area total	85.5	14.5		
III	n	242	32	274	
	% of area total	88.3	11.7		
IV	n	196	176	372	
	% of area total	52.7	47.3		
	Total	1229	390	1619	GT
	% of GT	75.9	24.1		

Table 40. Results by Area, Anne Arundel County Teachers, "Have you included any objectives from the Guide in your lesson plans this year?"

Area		Response (1) Yes	Response (2) No	Area Total
I	n	384	168	552
	% of area total	69.6	30.4	
II	n	281	117	398
	% of area total	70.6	29.4	
III	n	224	47	271
	% of area total	82.7	17.3	
IV	n	192	158	350
	% of area total	54.9	45.1	
	Total	1081	490	1571 GT
	% of GT	68.8	31.2	

Table 41. Results by Area, Anne Arundel County Teachers, "Would you rather see Career Education taught as a separate element of the curriculum instead of trying to integrate it into other subject area?"

Area		Response (1) Yes	(2) No	(3) Not Sure	Area Total	
I	n	127	299	145	571	
	% of area total	22.2	52.4	25.4		
II	n	93	224	89	406	
	% of area total	22.9	55.2	21.9		
III	n	59	148	67	274	
	% of area total	21.5	54.0	24.4		
IV	n	74	201	97	372	
	% of area total	19.9	54.0	26.1		
	Total	353	872	398	1623	GT
	% of GT	21.7	53.7	24.5		

Table 42 . Results by Area, Anne Arundel County Teachers, "Have you, as an individual or as a memeber of a group, worked with the Career Education resource person in your area during this school year in any of the following?"

	Affirmative Responses[1]									
	Area									
	I		II		III		IV		total	
Work Area:[2]	n	%	n	%	n	%	n	%	n	%
1	101	17.5	225	55.1	75	27.2	155	41.2	556	34.0
2	70	12.1	52	12.7	39	14.1	48	12.8	209	12.8
3	104	18.0	80	19.6	44	15.9	102	27.1	330	20.2
4	20	3.5	11	2.7	17	6.2	12	3.2	60	3.7
5	51	8.8	18	4.4	16	5.8	28	7.4	113	6.9
6	28	4.9	15	3.7	18	6.5	24	6.4	85	5.2
7	29	5.0	21	5.1	11	4.0	28	7.4	89	5.4
Total respondents:	557		408		276		376		1637	GT
% of GT	35.2		24.9		16.9		23.0			

[1] The percentage affirmative responses by area are calculated using the (area) Total Respondents as the denominator; the "total" column using the grand total (GT) as the denominator.

[2] Work Area:
1. Career Education orientation;
2. Specific curriculum unit planning;
3. Resource materials;
4. Coordination of field trip;
5. Bringing resource person into the classroom;
6. Classroom demonstration of Career Education materials;
7. Developing other Career Education teaching techniques.

Table 43. Results by Area, Anne Arundel County Teachers, "If you have not used the services of the Area Career Education resource person, is it because you were not aware of the services offered?"

Area		Response (1) Yes	(2) No	No Response[1]	Area Total	
I	n	123	338	116	577	
	% of area total	21.3	58.6	30.1		
II	n	69	241	96	406	
	% of area total	17.0	59.4	23.6		
III	n	32	180	64	276	
	% of area total	11.6	65.2	23.2		
IV	n	112	164	99	375	
	% of area total	29.9	43.7	26.4		
	Total	336	923	375	1634	GT
	%	20.6	56.5	22.9		

[1] Indicative of use.

Table 44. Results by Area, Anne Arundel County Teachers, "Is there a Career Education mini-resource center in your school?"

Area		Response (1) Yes	(2) No	(3) Not Sure	Area Total	
I	n	294	107	158	559	
	% of area total	52.6	19.1	28.3		
II	n	218	75	110	403	
	% of area total	54.1	18.6	27.3		
III	n	90	87	93	270	
	% of area total	33.3	32.2	34.4		
IV	n	116	97	151	364	
	% of area total	31.9	26.6	41.5		
	Total	718	366	512	1596	GT
	% of GT	45.0	22.9	32.1		

Table 45. Results by Area, Anne Arundel County Teachers, "If there is (a Career Education mini-resource center in your school), have you used it this school year?"

Area		Response (1) Yes	Response (2) No	Area Total	
I	n	111	337	448	
	% of area total	24.8	75.2		
II	n	99	202	301	
	% of area total	32.9	67.1		
III	n	57	122	179	
	% of area total	31.8	68.2		
IV	n	72	153	225	
	% of area total	32.0	68.0		
	Total	339	814	1153	GT
	% of GT	29.4	70.6		

Table 46 . Results by Area, Anne Arundel County Teachers, "If there is (a Career Education mini-resource center in your school), have your students used it?"

Area		Response (1) Yes	Response (2) No	Area Total	
I	n	117	302	419	
	% of area total	27.9	72.1		
II	n	95	179	274	
	% of area total	34.7	65.3		
III	n	50	124	174	
	% of area total	28.7	71.3		
IV	n	67	144	211	
	% of area total	31.7	68.2		
	Total	329	749	1078	GT
	% of GT	30.5	69.5		

Table 47. Results by Area, Anne Arundel County Teachers, "Is there a Technology Center in your school (elementary only)?"

Area		Response (1) Yes	(2) No	(3) Not Sure	Area Total	
I	n	120	132	90	342	
	% of area total	35.1	38.6	26.3		
II	n	50	114	52	216	
	% of area total	23.1	52.8	24.1		
III	n	142	44	33	219	
	% of area total	64.8	20.1	15.1		
IV	n	37	138	42	217	
	% of area total	17.0	63.6	19.3		
	Total	349	428	217	994	GT
	% of GT	35.1	43.1	21.8		

Table 48. Results by Area, Anne Arundel County Teachers, "If yes (there is a Technology Center in your school, elementary only), have you made use of the Technology Center resource?"

Area		Response (1) Yes	Response (2) No	Area Total	
I	n	50	199	249	
	% of area total	29.1	79.9		
II	n	19	121	140	
	% of area total	13.6	86.4		
III	n	50	130	180	
	% of area total	27.8	72.2		
IV	n	25	84	109	
	% of area total	22.9	77.1		
	Total	144	534	678	GT
	% of GT	21.2	78.8		

Table 49. Results by Area, Anne Arundel County Teachers, "Is there a counselor in your school?"

Area		Response (1) Yes	Response (2) No	Area Total	
I	n	274	258	532	
	% of area total	51.5	48.5		
II	n	203	184	387	
	% of area total	52.4	47.5		
III	n	104	163	267	
	% of area total	28.9	61.0		
IV	n	220	127	347	
	% of area total	63.4	36.6		
	Total	801	732	1533	GT
	% of GT	52.2	47.7		

Table 50. Results by Area, Anne Arundel County Teachers, "If there is (a counselor in your school), has the counselor been involved with you, individually or as a member of a group, in any of the following?"

Affirmative Responses[1]

Area

Area of Involvement[2]	I		II		III		IV		Total	
	n	%	n	%	n	%	n	%	n	%
1	39	14.2	14	6.9	34	32.7	34	15.9	122	15.2
2	35	12.8	19	9.4	28	26.9	34	15.4	116	14.5
3	42	15.3	10	4.9	17	16.3	60	27.3	129	16.1
4	21	7.7	11	5.4	8	7.7	24	10.9	64	8.0
5	128	46.7	106	52.2	50	48.1	92	41.8	376	46.9
Total[3]	274		203		104		220		801	GT

[1]The percentage of affirmative responses by area are calculated using the (area) Total Respondents as the denominator, the "Total" column using the grand total (GT) as the denominator.

[2]Area of Involvement:
1. Decision making program
2. Value clarification
3. Student self concept programs
4. Use of community resources
5. Other areas

[3]Total responding "yes" by area to item number 14, (see Table , above). The sume of the column entries will not, therefore, match the total given, unless all teachers responding "yes" to item number 14 also responded to item number 15.

Table 51. Results of Item Number 18, Anne Arundel County Career Education Teacher Survey, Area I, "For this school year, estimate the average frequency with which you have been using the following techniques and activities related to Career Education."

Activity:		Response[1] 1	2	3	4	5
1. Integration of basic skills with Career Education	n	64	112	99	165	59
	%	12.8	22.4	19.8	33.1	11.8
2. Use of library resources related to careers	n	14	54	92	215	138
	%	2.7	10.5	17.9	41.9	26.9
3. Interrelation of concepts and careers	n	47	103	99	168	73
	%	9.6	21.0	20.2	34.3	14.9
4. Use of video taping of Career Education activities	n	2	6	21	66	397
	%	0.4	1.2	4.3	13.4	80.7
5. Class presentation of career opportunities	n	11	32	60	219	170
	%	2.2	6.5	12.2	44.5	34.5
6. Displays concerning careers and jobs	n	24	25	62	209	181
	%	4.8	5.0	12.4	41.7	36.1
7. Group discussions of careers and job opportunities	n	16	45	95	248	109
	%	2.5	8.8	18.5	48.3	21.2
8. Pupil selection of career field of interest	n	14	27	52	206	203
	%	2.8	5.4	10.4	41.0	40.4
9. Newspaper ads and magazines related to job opportunities	n	6	29	65	163	244
	%	1.2	5.7	12.8	32.1	48.1
10. Career Education materials	n	21	32	54	214	174
	%	4.4	6.7	11.4	45.0	36.6
11. Career-related role playing and simulations	n	11	22	60	173	240
	%	2.2	4.3	11.9	34.2	47.4
12. Joint planning of activities with Career Education project staff	n	1	7	5	81	403
	%	0.2	1.4	1.0	16.3	81.1
13. Career Education films or filmstrips	n	2	3	4	57	420
	%	0.4	0.6	.8	11.7	86.4
14. Visits to factories, businesses or self-employed persons	n	4	23	43	192	247
	%	0.8	4.5	8.4	37.7	48.5

[1](Key Responses): 1. nearly every day
2. at least once/week
3. at least once/month
4. a few times during year
5. never

Table 52. Results of Item Number 18, Anne Arundel County Career Education Teacher Survey, Area II, "For this school year, estimate the average frequency with which you have been using the following techniques and activities related to Career Education."

Activity:		Response[1] 1	2	3	4	5
1. Integration of basic skills with Career Education	n	37	70	59	135	61
	%	10.2	19.3	16.3	37.3	16.8
2. Use of library resources related to careers	n	4	37	49	149	130
	%	1.1	10.0	13.3	40.4	35.2
3. Interrelation of concepts and careers	n	23	64	68	127	75
	%	6.4	17.9	19.0	35.6	21.0
4. Use of video taping of Career Education activities	n	0	5	8	39	309
	%	0.0	1.4	2.2	10.8	85.6
5. Class presentation of carder opportunities	n	4	19	40	137	158
	%	1.1	5.3	11.2	38.3	44.1
6. Displays concerning careers and jobs	n	7	11	40	120	182
	%	1.9	3.1	11.1	33.3	50.6
7. Group discussions of careers and job opportunities	n	1	23	71	162	106
	%	0.3	6.3	19.6	44.6	29.2
8. Pupil selection of career field of interest	n	5	14	37	148	160
	%	1.4	3.8	10.2	40.7	44.0
9. Newspaper ads and magazines related to job opportunities	n	4	14	34	129	190
	%	1.1	3.8	9.3	35.1	51.8
10. Career Education materials	n	10	23	40	122	166
	%	2.8	6.4	11.1	33.8	46.0
11. Career-related role playing and simulations	n	5	12	32	105	213
	%	1.4	3.3	8.7	28.6	58.0
12. Joint planning of activities with Career Education project staff	n	1	4	4	53	294
	%	0.3	1.1	1.1	14.9	82.6
13. Career Education films or filmstrips	n	1	5	6	35	310
	%	0.3	1.4	1.7	1.8	86.8
14. Visits to factories, businesses or self-employed persons	n	2	11	37	116	197
	%	0.5	3.0	10.2	32.0	54.3

[1](Key Responses): 1. nearly every day
2. at least once/week
3. at least once/month
4. a few times during year
5. never

Table 53. Results of Item Number 18, Anne Arundel County Career Education Teacher Survey, Area III, "For this school year, estimate the average frequency with which you have been using the following techniques and activities related to Career Education."

Activity:		Response[1] 1	2	3	4	5
1. Integration of basic skills with Career Education	n	26	59	45	99	52
	%	10.4	23.5	17.9	39.4	8.8
2. Use of library resources related to careers	n	7	38	41	122	44
	%	2.8	15.1	16.3	48.4	17.5
3. Interrelation of concepts and careers	n	14	53	62	93	21
	%	5.8	21.8	25.5	38.3	8.6
4. Use of video taping of Career Education activities	n	1	4	6	23	212
	%	0.4	1.6	2.4	9.3	86.2
5. Class presentation of career opportunities	n	6	14	39	117	71
	%	2.4	5.7	15.8	47.4	28.7
6. Displays concerning careers and jobs	n	4	11	35	103	96
	%	1.6	4.4	14.1	41.4	38.5
7. Group discussions of careers and job opportunities	n	3	21	46	139	38
	%	1.2	8.5	18.6	56.3	15.4
8. Pupil selection of career field of interest	n	1	17	23	115	90
	%	0.4	6.9	9.3	46.7	36.6
9. Newspaper ads and magazines related to job opportunities	n	7	13	30	93	103
	%	2.8	5.3	12.2	37.8	41.9
10. Career Education materials	n	9	17	36	107	69
	%	3.8	7.2	15.2	45.1	28.7
11. Career-related role playing and simulations	n	7	11	32	99	95
	%	2.9	4.5	13.1	40.6	38.9
12. Joint planning of activities with Career Education project staff	n	0	2	5	54	184
	%	5.0	0.8	2.0	22.0	75.1
13. Career Education films or filmstrips	n	0	2	4	30	203
	%	0.0	0.8	1.7	12.5	84.9
14. Visits to factories, businesses or self-employed persons	n	2	10	36	105	93
	%	0.8	4.1	14.6	42.7	37.8

[1](Key Responses): 1. nearly every day
2. at least once/week
3. at least once/month
4. a few times during year
5. never

Table 54. Results of Item Number 18, Anne Arundel County Career Education Teacher Survey, Area IV, "For this school year, estimate the average frequency with which you have been using the following techniques and activities related to Career Education."

Activity:		Response[1] 1	2	3	4	5
1. Integration of basic skills with Career Education	n	54	54	61	75	65
	%	17.5	17.5	19.7	24.3	21.0
2. Use of library resources related to careers	n	10	31	47	124	106
	%	3.1	9.7	14.8	39.0	33.3
3. Interrelation of concepts and careers	n	29	52	49	98	67
	%	9.8	17.6	16.6	33.2	22.7
4. Use of video taping of Career Education activities	n	7	7	7	38	244
	%	2.3	2.3	2.3	12.5	80.5
5. Class presentation of career opportunities	n	6	19	43	119	119
	%	2.0	6.2	14.0	38.9	38.9
6. Displays concerning careers and jobs	n	11	15	26	125	133
	%	3.5	4.8	8.4	40.3	42.9
7. Group discussions of careers and job opportunities	n	8	30	56	132	86
	%	2.6	9.6	17.9	42.3	27.6
8. Pupil selection of career field of interest	n	9	10	31	118	137
	%	2.9	3.3	10.2	38.7	44.9
9. Newspaper ads and magazines related to job opportunities	n	10	20	36	89	157
	%	3.2	6.4	11.5	28.5	50.3
10. Career Education materials	n	11	17	30	100	136
	%	3.7	5.8	10.2	34.0	46.3
11. Career-related role playing and simulations	n	7	21	34	82	160
	%	2.3	6.9	11.2	27.0	52.6
12. Joint planning of activities with Career Education project staff	n	1	4	2	50	243
	%	0.3	1.3	0.7	16.7	81.0
13. Career Education films or filmstrips	n	1	4	3	35	255
	%	0.3	1.3	1.0	11.7	85.6
14. Visits to factories, businesses or self-employed persons	n	1	12	24	88	178
	%	0.3	4.0	7.9	29.0	58.7

[1](Key Responses): 1. nearly every day
2. at least once/week
3. at least once/month
4. a few times during year
5. never

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